



# **CALIFORNIA SAFE ROADS**

*2020 - 2024 Strategic Highway Safety Plan*

Strategic Highway Safety Plan (SHSP)  
Development Outreach Meeting

Los Angeles Region

April 24, 2019



# AGENDA



8:30 – 9:15 AM: Welcome / Introductions / Overview

9:15 – 9:45 AM: Statewide Summary

9:45 – 10:15 AM: Regional Summary

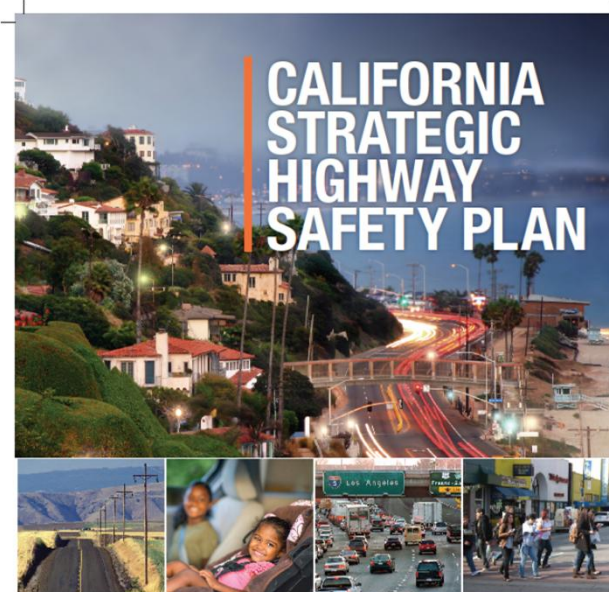
10:15 – 11:30 AM: Safety Strategy Session

11:30 – 12:00 PM: Report Out and Next Steps

12:30 – 1:30 PM: Tribal Outreach Session

# SHSP OVERVIEW

- Guides safety activities for all roadway users
- Addresses safety on all public roads
- All agency coordinated approach
- Strategic, data-driven process
- Federal requirement
- Current SHSP covers 2015 to 2019



2015-2019

**Website:** <http://www.dot.ca.gov/trafficops/shsp/>  
**Email:** SHSP@dot.ca.gov

# SHSP OVERVIEW

- Guides safety activities for all roadway users
- Addresses safety on all public roads
- All agency coordinated approach
- Strategic, data-driven process
- Federal requirement
- Current SHSP covers 2015 to 2019



2015-2019

# SHSP LOCAL AND REGIONAL BENEFITS



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

## Improve safety

- Save lives

- Reduce preventable injuries

## Improve livability

- Support active transportation goals

- Improve public health

- Coordinate with congestion management efforts

## Share local knowledge

- Exchange best practices

- Access information and data

- Funding and partnering opportunities

# SHSP VISION, MISSION & OBJECTIVE



## Vision

Safe Public Roads Across California

## Mission

Ensure safety for all modes of travel on  
California's public roads

## Objective

Zero Fatalities & Serious Injuries

# MULTIPLE SAFETY APPROACHES



# STATEWIDE COLLABORATION

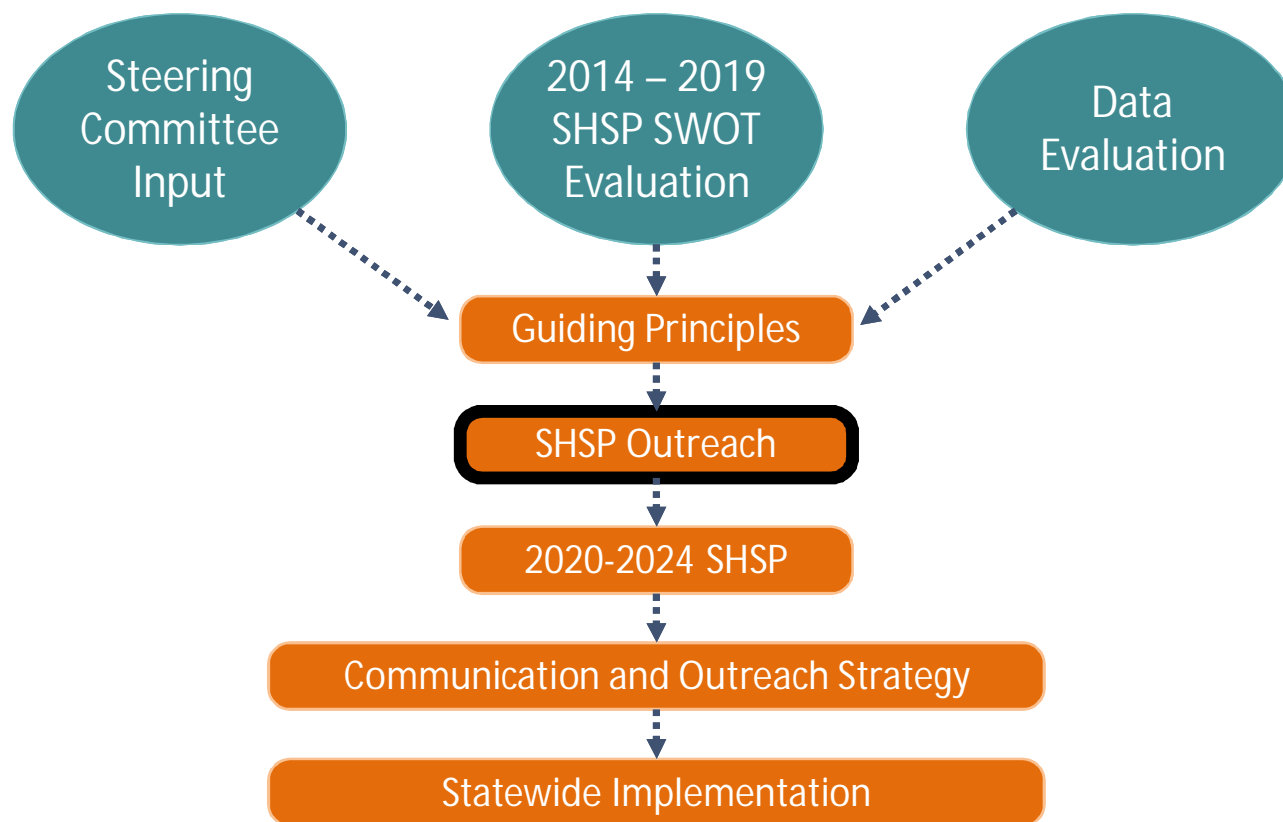


Working together  
to reduce fatalities  
and serious injuries on  
all public roadways.

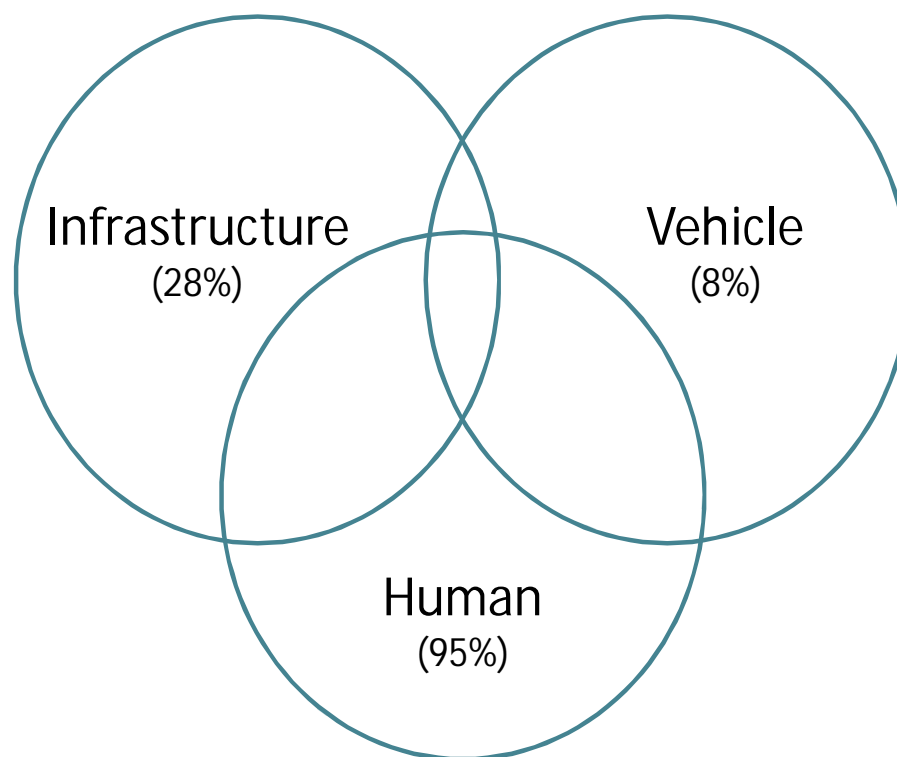




# DEVELOPMENT PROCESS



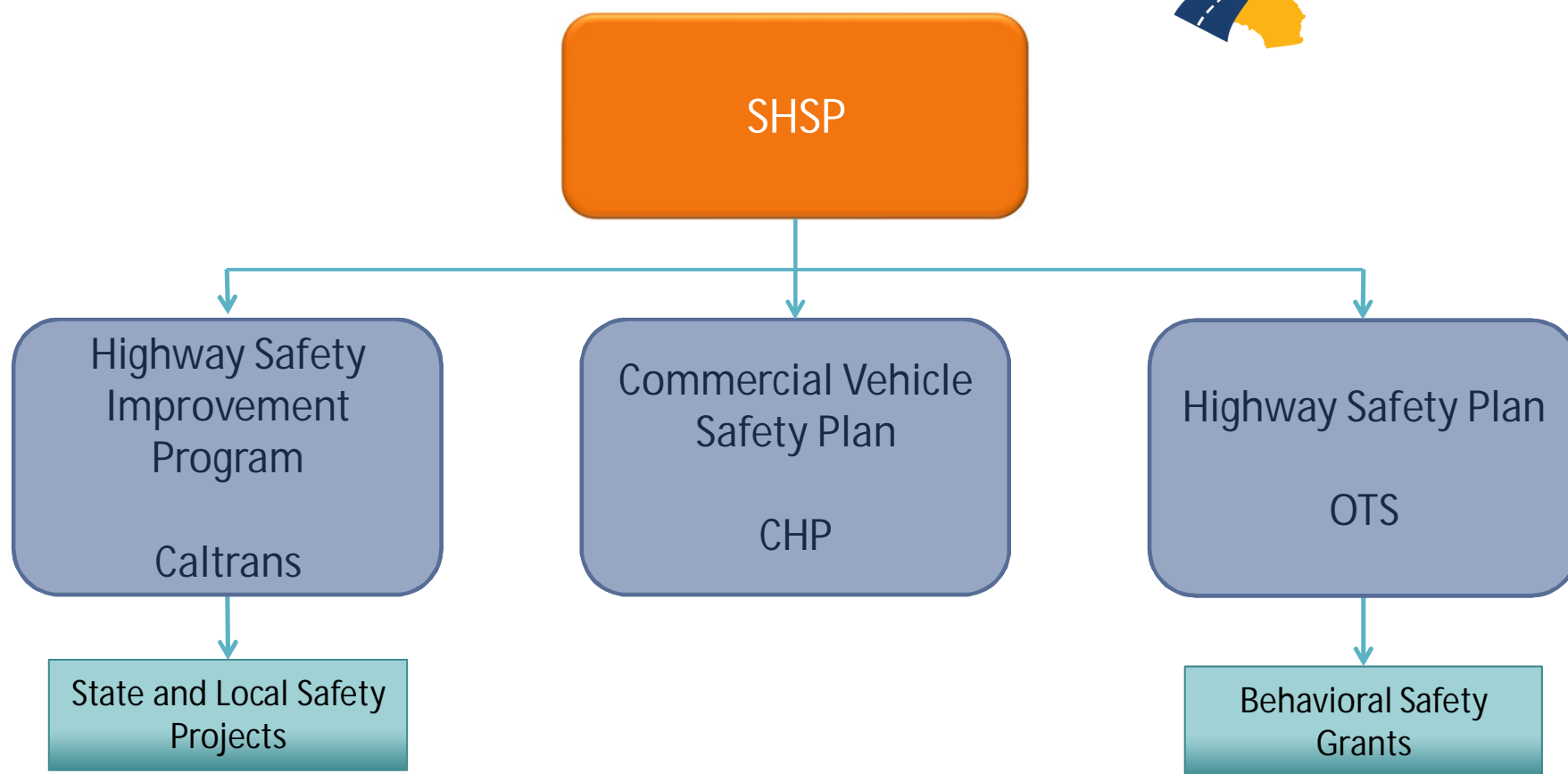
# COLLISION FACTORS



# 4 Es now 5 Es OF TRAFFIC SAFETY



# SHSP CONNECTIONS



# CALTRANS HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)



- FAST Act
  - Continues the Highway Safety Improvement Program as a core Federal Aid program to significantly reduce fatalities and serious injuries on all public roads.
  - Local HSIP Program
    - Safety Improvement Projects (Benefit/Cost selected safety projects)
    - (New) Systemic Safety Analysis Report Program (SSARP)



# OFFICE OF TRAFFIC SAFETY



- Liaison with the National Highway Traffic Safety Administration (NHTSA)
- California Highway Safety Plan
- Annual Performance Report
- Grant Programs



# CALIFORNIA HIGHWAY PATROL



- Mission - Provide the highest level of Safety, Service, and Security
- CHP involvement in the SHSP
  - Executive Committee - Commissioner Warren Stanley
  - Steering Committee - Assistant Chief
  - Lead or Co-lead on 10 of the 15 Challenge Areas
  - Active involvement on 13 of the 15 Challenge Areas
  - Lead or Co-lead on 25 of the Actions
  - Mileage Death Rate on the increase (2013: .94 to 2016: 1.08)
  - Work with the Office of Traffic Safety to incorporate SHSP initiatives into the CHP Grants



# CALIFORNIA HIGHWAY PATROL



- Current SHSP Actions the CHP is working on
  - Action 5.1 – Update CHP DUI Checkpoint Educational Pamphlet with an emphasis on drugs
  - Action 6.1 – Develop an issue paper establishing benefits of Standardized Field Sobriety Tests (SFSTs) training for law enforcement agencies
  - Action 6.2 – Increase the number of Advanced Roadside Impaired Driving Enforcement (ARIDE) personnel trained by 8 percent
  - Action 4.1 – Develop a media campaign....to raise awareness about speeding and aggressive driving
  - Action 2.2 - Identify locations with reported pedestrian safety issues and conduct high visibility pedestrian safety enforcement operations





# CALIFORNIA HIGHWAY PATROL



- Commercial Vehicle Safety Plan
  - Funded by the Motor Carrier Safety Assistance Program (MCSAP) Grant 2018-20
  - Reduce commercial motor vehicle (CMV) involved collisions within CHP jurisdiction, including the Mileage Death Rate for CMVs
  - 53 Commercial Vehicle Enforcement Facilities (38 locations)
  - 144 Mobile Road Enforcement Officers
  - CMV Fatal Crashes – 302.6 per year (5 year average)
  - MCSAP Activities: Driver and Vehicle Inspections, Enforcement, Compliance Reviews and Audits, Public Education, and Data Collection



# FHWA



- SHSP is a requirement under SAFETEA-LU
- Statewide-coordinated safety plan led by State DOT that provides comprehensive framework for reducing fatalities and serious injuries on all public roads
- Identifies a State's key safety needs and guides investment decisions towards strategies and countermeasure with the most potential to save lives and prevent injuries
- SHSP shall be data driven, evaluate performance and updated
- SHSP Challenge Areas, Revisions and Stakeholders







## CALIFORNIA SAFE ROADS

2020 - 2024 Strategic Highway Safety Plan







# **CALIFORNIA SAFE ROADS**

*2020 - 2024 Strategic Highway Safety Plan*

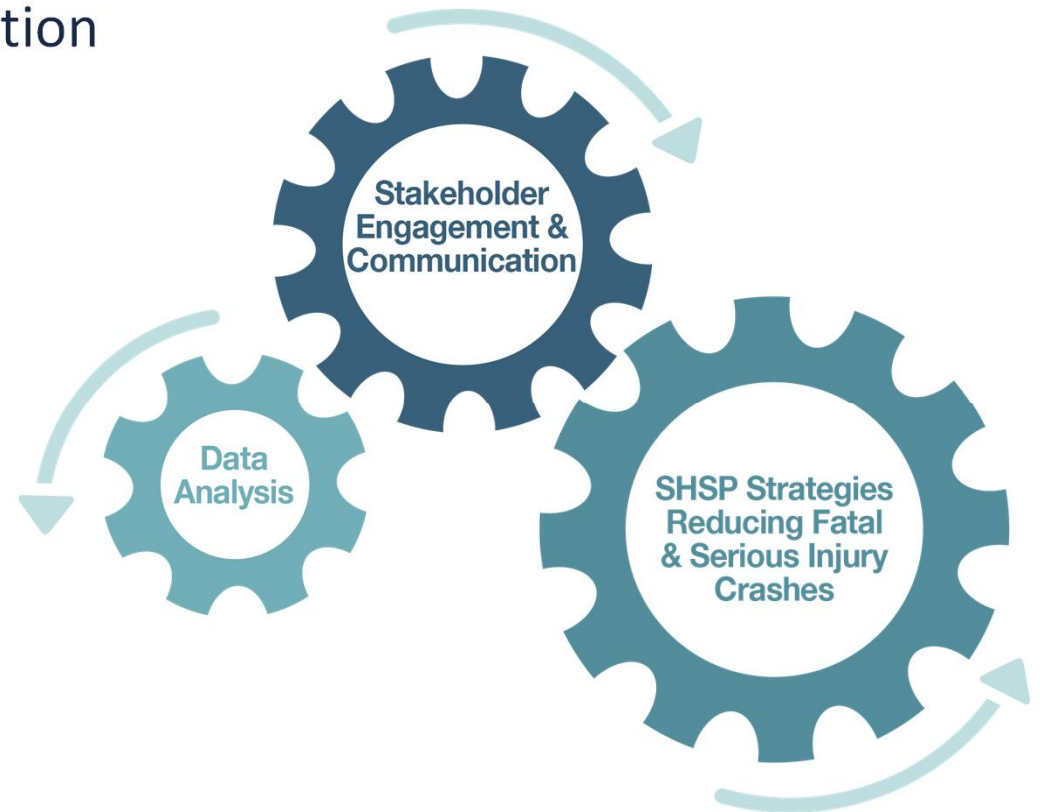
Statewide Summary



# DATA-DRIVEN IMPLEMENTATION



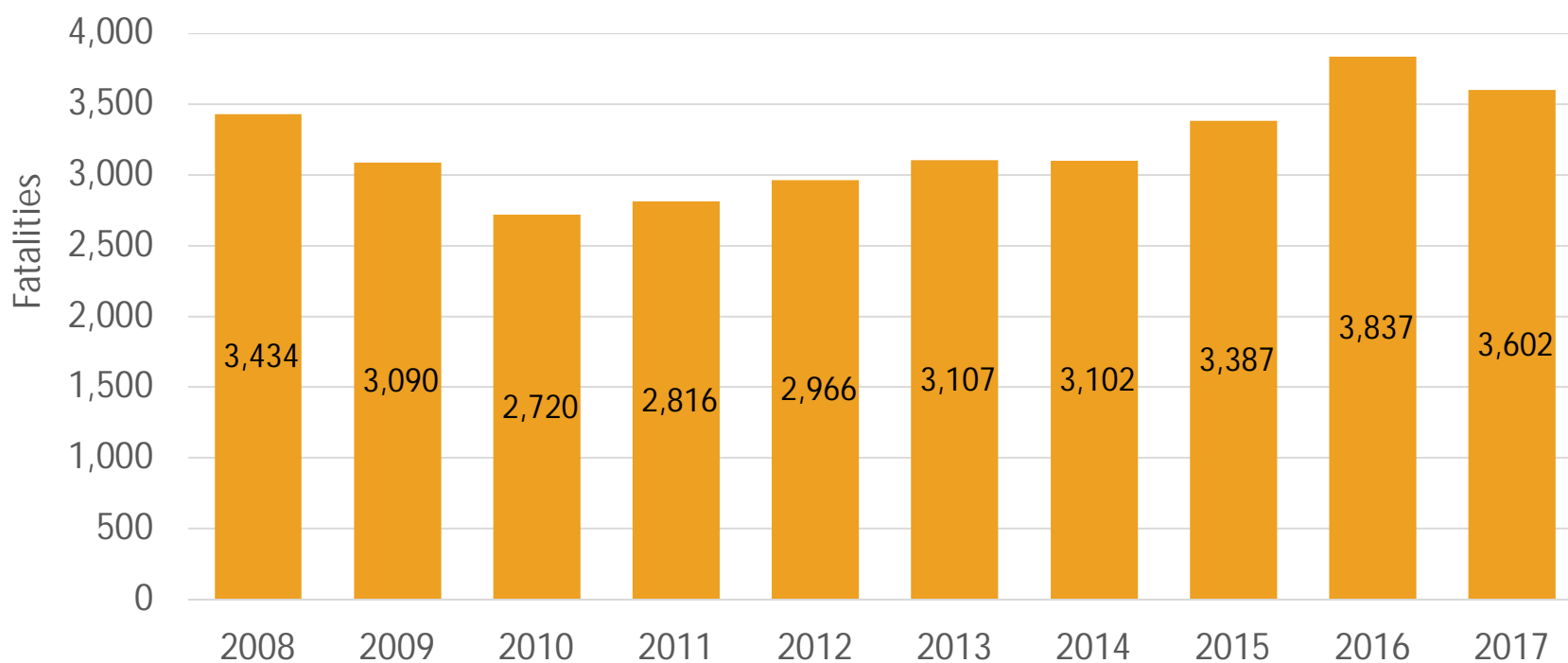
- Data analysis drives implementation
- 2020 to 2024 Data
  - 10 years (2008 to 2017)
  - 128,974 fatal and serious injury collisions
  - 147,458 fatal and serious injuries
  - 1.14 fatal and serious injuries / collision



# STATEWIDE



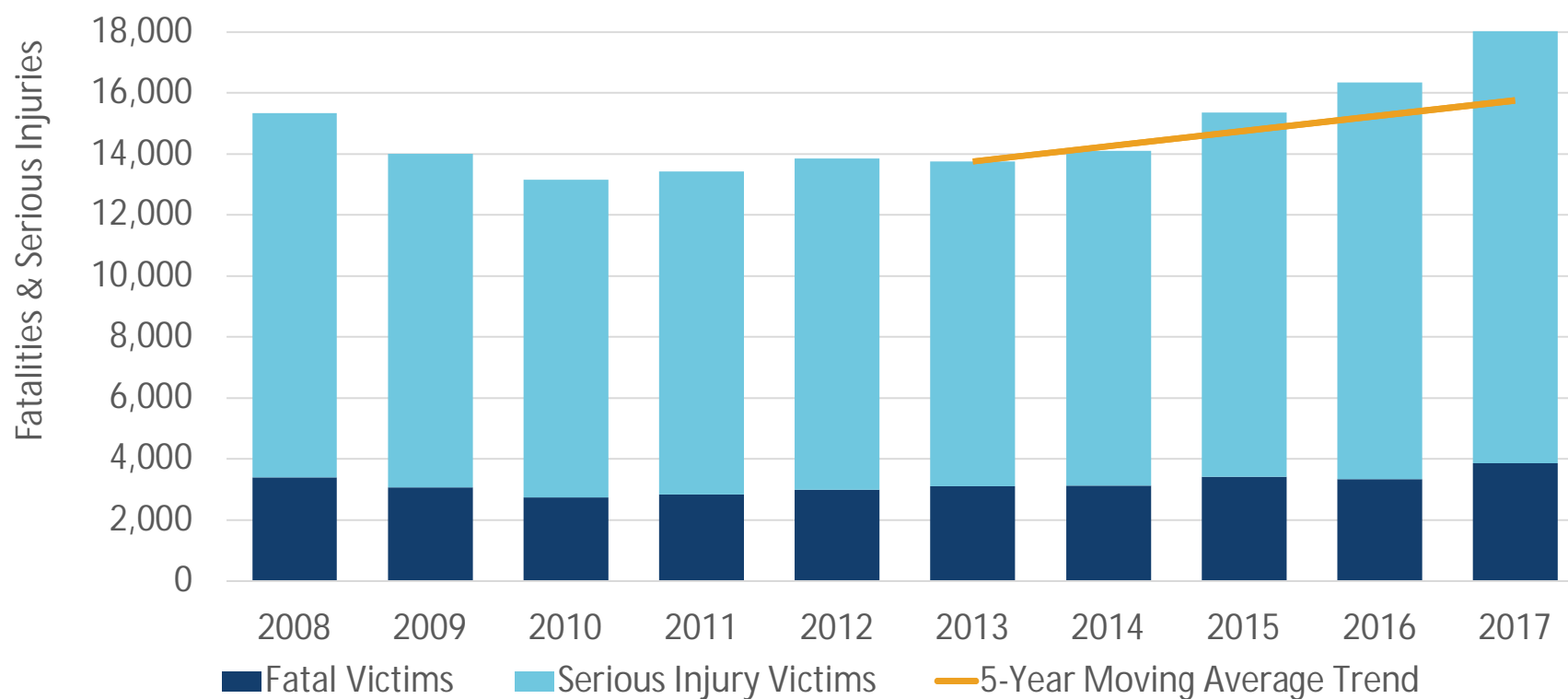
Total Fatalities by Year



# STATEWIDE



Total Fatalities and Serious Injuries by Year

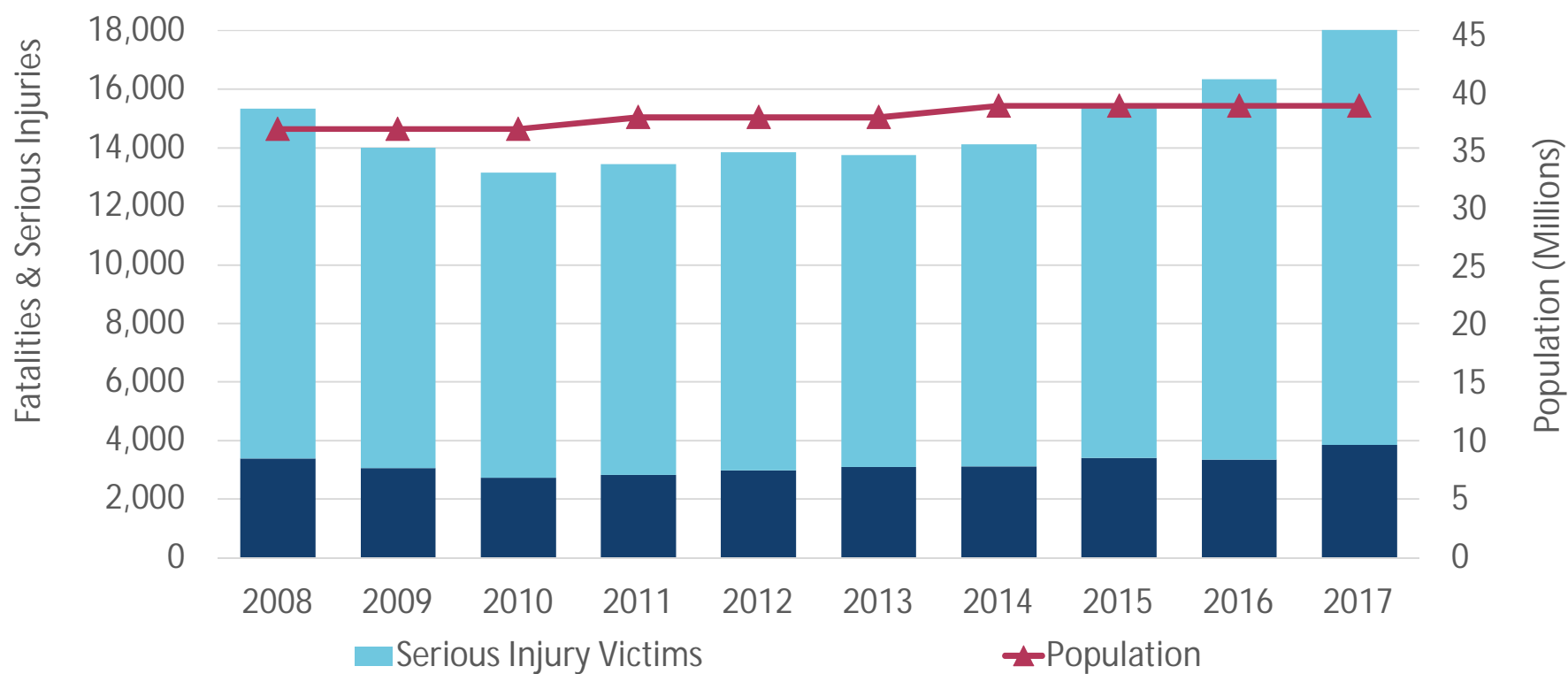




# STATEWIDE



Total Fatalities and Serious Injuries by Year Versus Population



# STATEWIDE



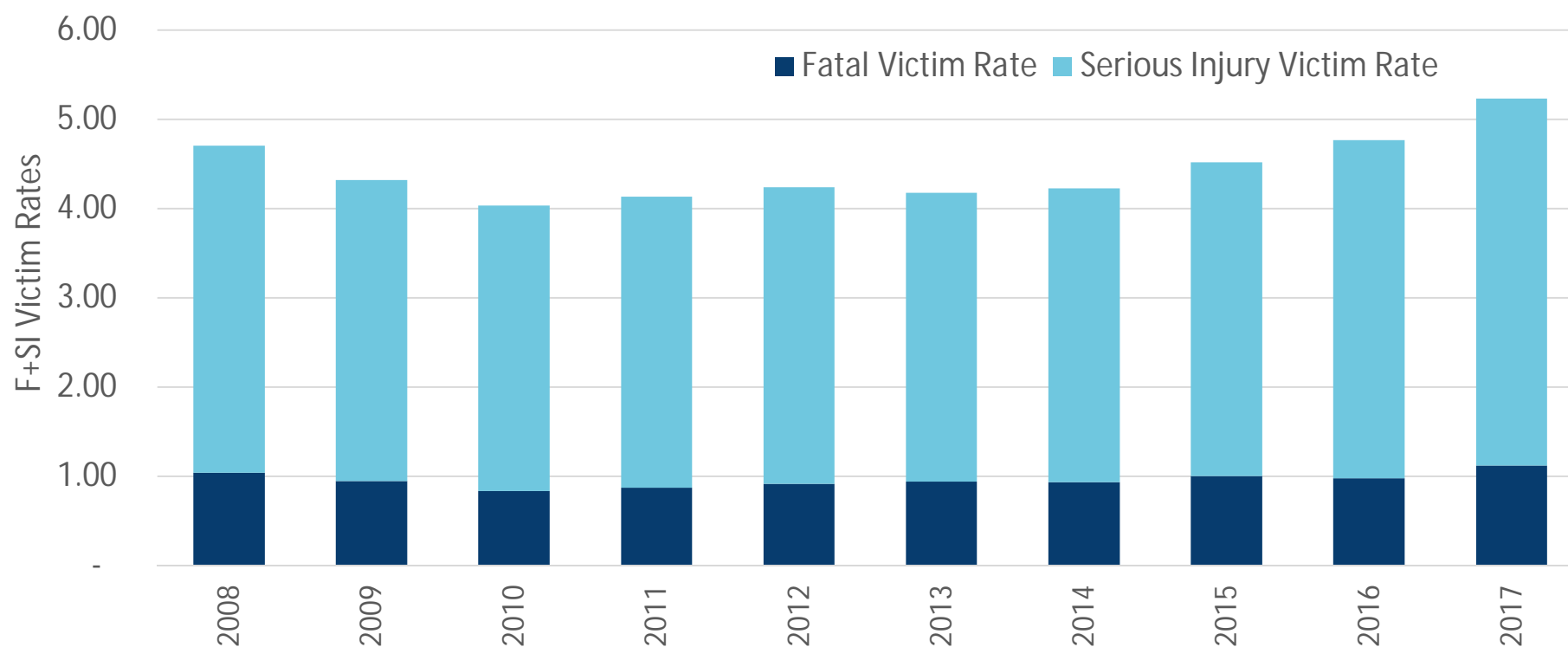
Total Fatalities and Serious Injuries by Year Versus VMT



# STATEWIDE



## Fatality & Serious Injury Rates

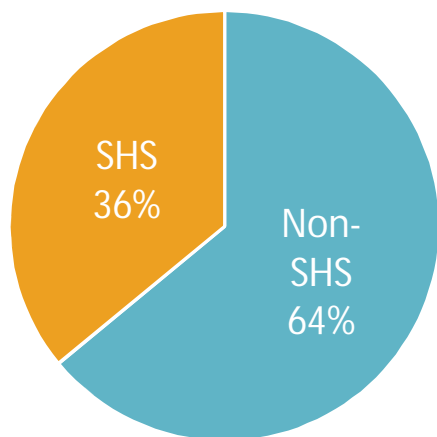


# STATEWIDE

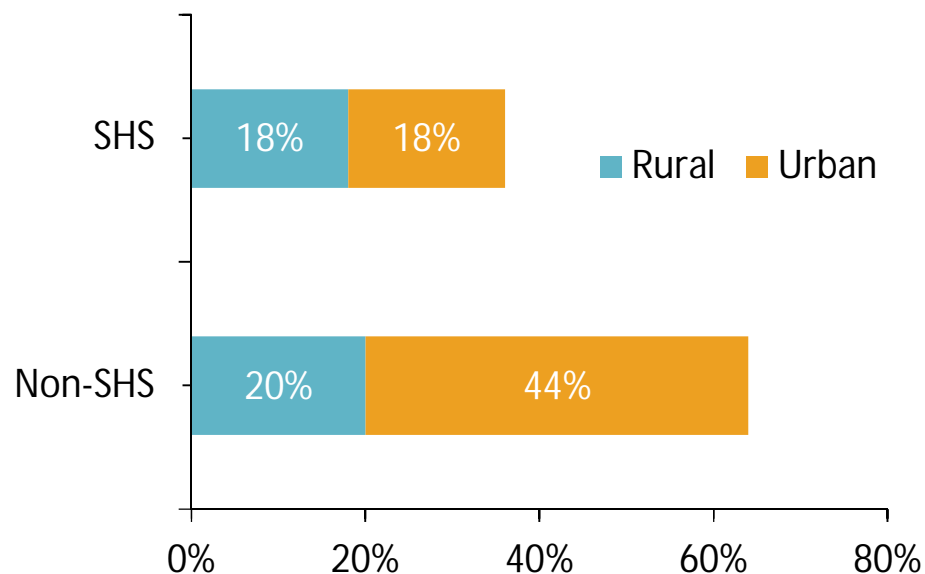
## Fatal & Serious Injury Collisions



### State Highway System (SHS) vs. Non-SHS

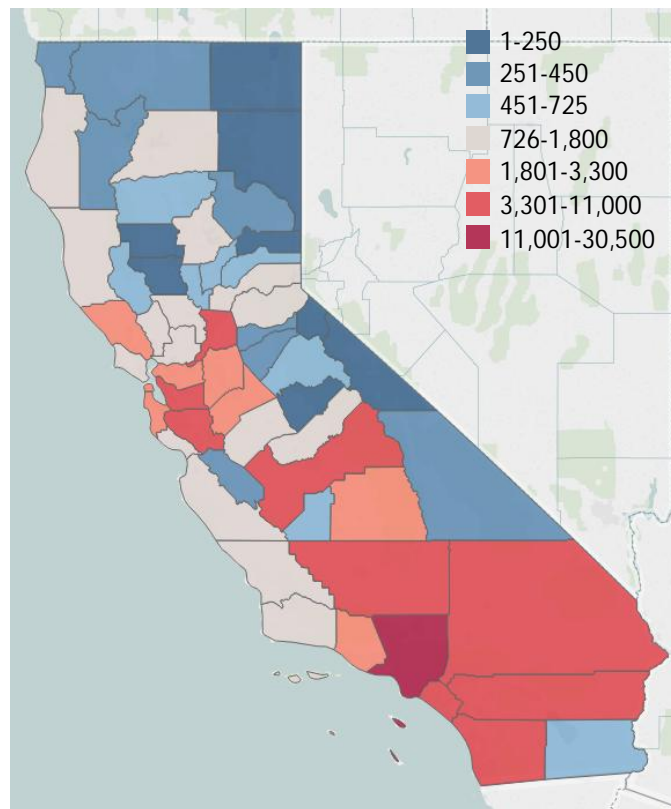


### Percent of Victims by Location

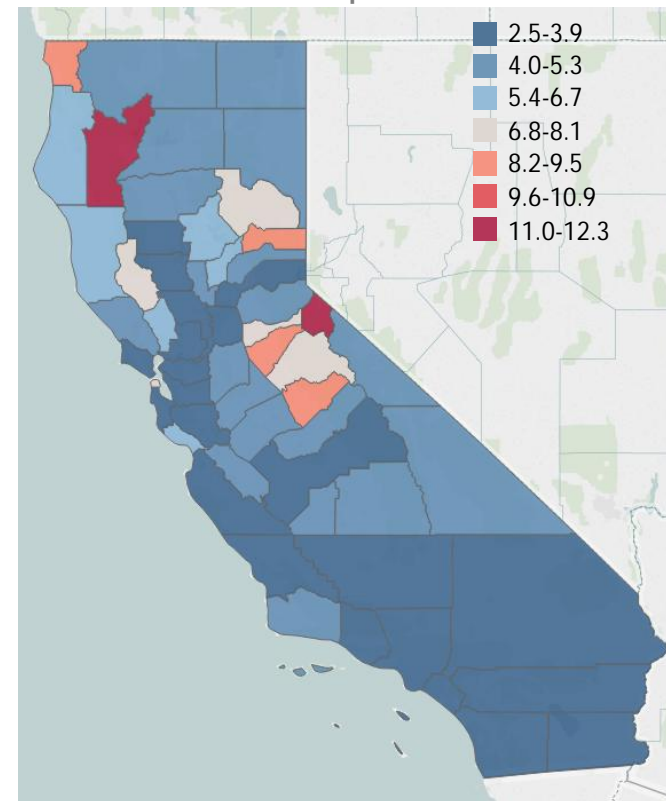


# STATEWIDE

## F+SI Collisions



## F+SI Collision Rate per 100M VMT





# **CALIFORNIA SAFE ROADS**

*2020 - 2024 Strategic Highway Safety Plan*

## Los Angeles Region Summary



# OUTREACH EVENTS



## CALIFORNIA SAFE ROADS 2020 - 2024 Strategic Highway Safety Plan

Join us at one of the following locations to collaborate on eliminating fatalities and serious injuries on all roadways in California.

- April 10 // Sacramento**
- April 11 // San Francisco Bay Area**
- April 12 // Redding**
- April 23 // San Diego**
- April 24 // Greater Los Angeles Area**
- April 25 // Fresno**

Email [Ca-SHSP@Kimley-Horn.com](mailto:Ca-SHSP@Kimley-Horn.com) for more information.

**Website:** <http://www.dot.ca.gov/trafficops/shsp/>  
**Email:** [SHSP@dot.ca.gov](mailto:SHSP@dot.ca.gov)

# LOS ANGELES REGION

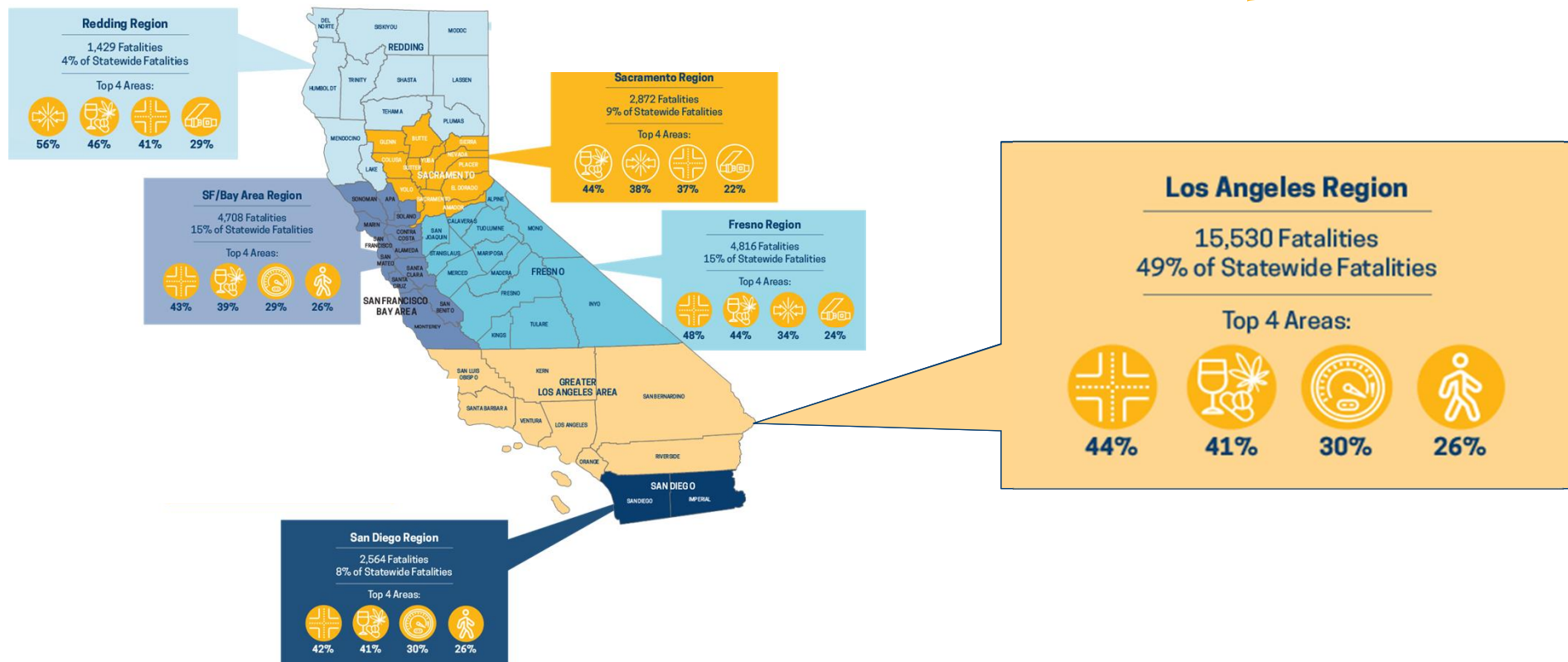


## 8 Counties

- Kern
- Los Angeles
- Orange
- Riverside
- San Bernardino
- San Louis Obispo
- Santa Barbara
- Ventura



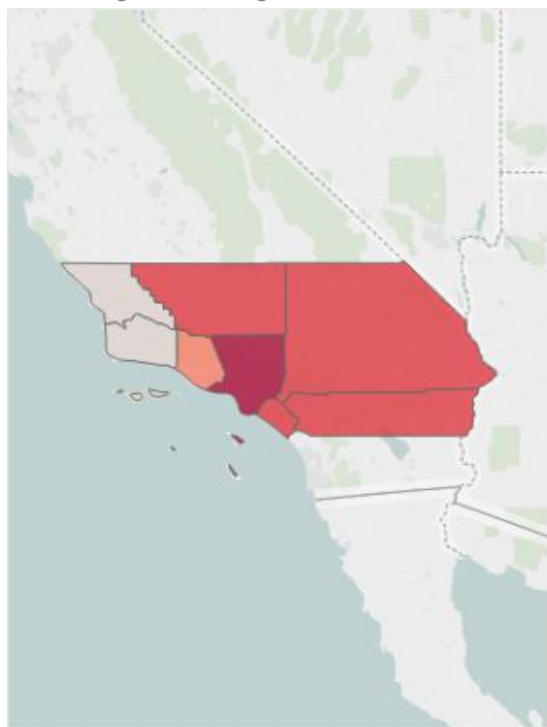
# REGIONAL COLLISION DATA



# REGIONAL COLLISION DATA

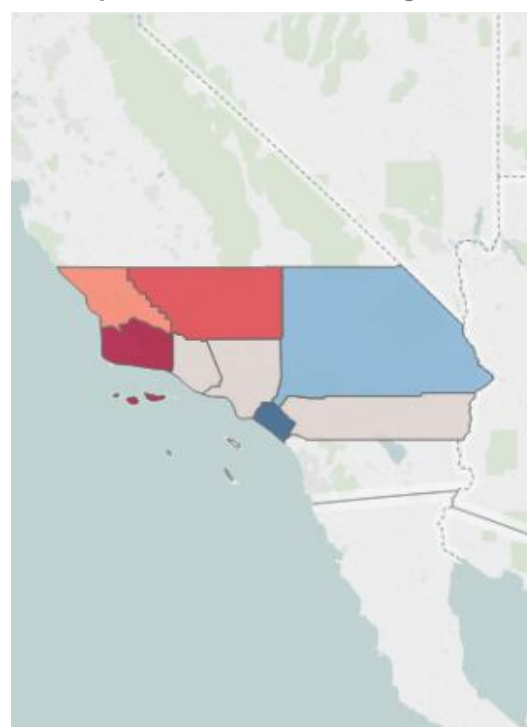


F+SI by County



County	F+SI
San Louis	
Obispo	1,225
Santa	
Barbara	1,680
Ventura	2,611
Kern	3,352
Riverside	7,597
San	
Bernardino	7,707
Orange	7,832
Los Angeles	30,382

F+SI per 100M VMT by County

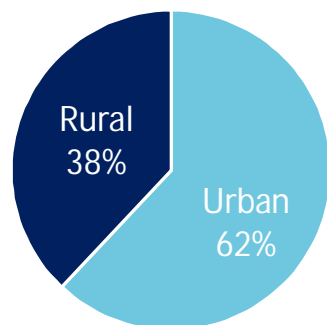


County	F+SI per 100M VMT
Orange	2.6
San	
Bernardino	3.2
Riverside	3.4
Ventura	3.5
Los Angeles	3.5
San Louis	
Obispo	3.8
Kern	3.9
Santa	
Barbara	4.3

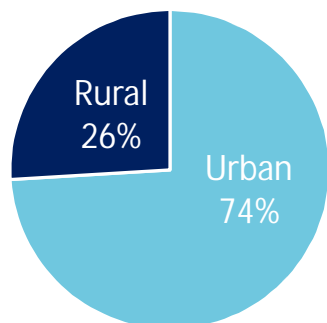
# REGIONAL COLLISION DATA

## Population

*Statewide:*



*Los Angeles Region:*



F+SI trends have more urban collisions in this region than California overall.

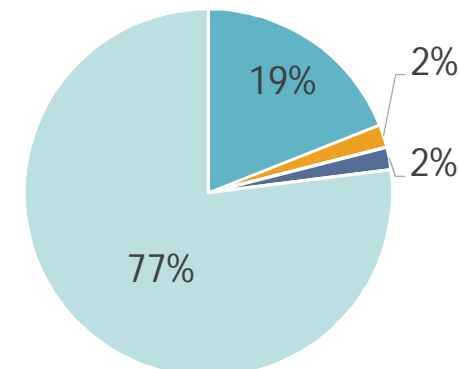


**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

## Location Type

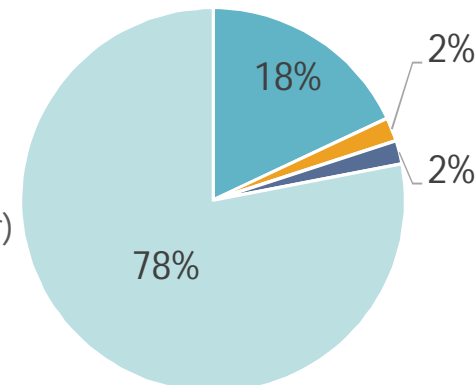
*Statewide:*

- Highway
- Intersection
- Ramp (or Collector)
- Not State Highway



*Los Angeles Region:*

- Highway
- Intersection
- Ramp (or Collector)
- Not State Highway

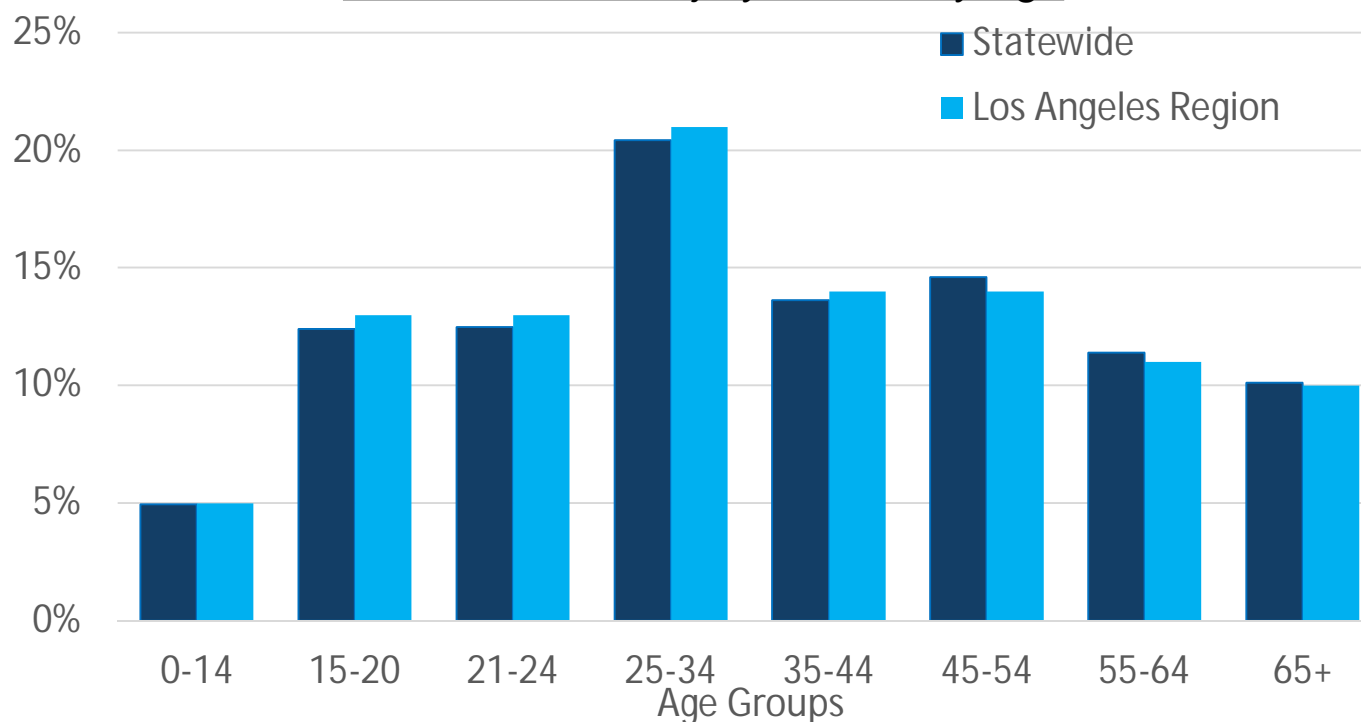


F+SI trends were similar in this region to California overall.

# REGIONAL COLLISION DATA



Fatal & Serious Injury Victims by Age

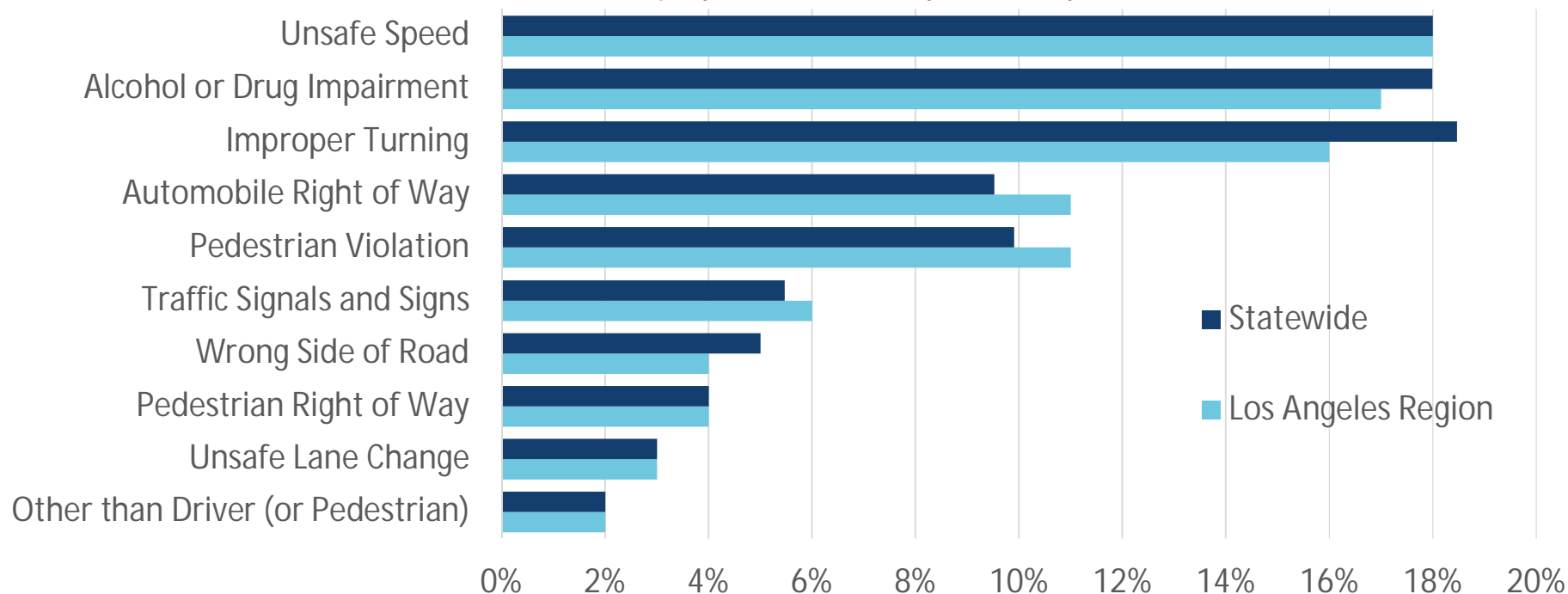


F+SI collisions involved more people aged 15-44 in this region than California overall.

# REGIONAL COLLISION DATA



## Fatal & Serious Injury Collisions by Primary Cause

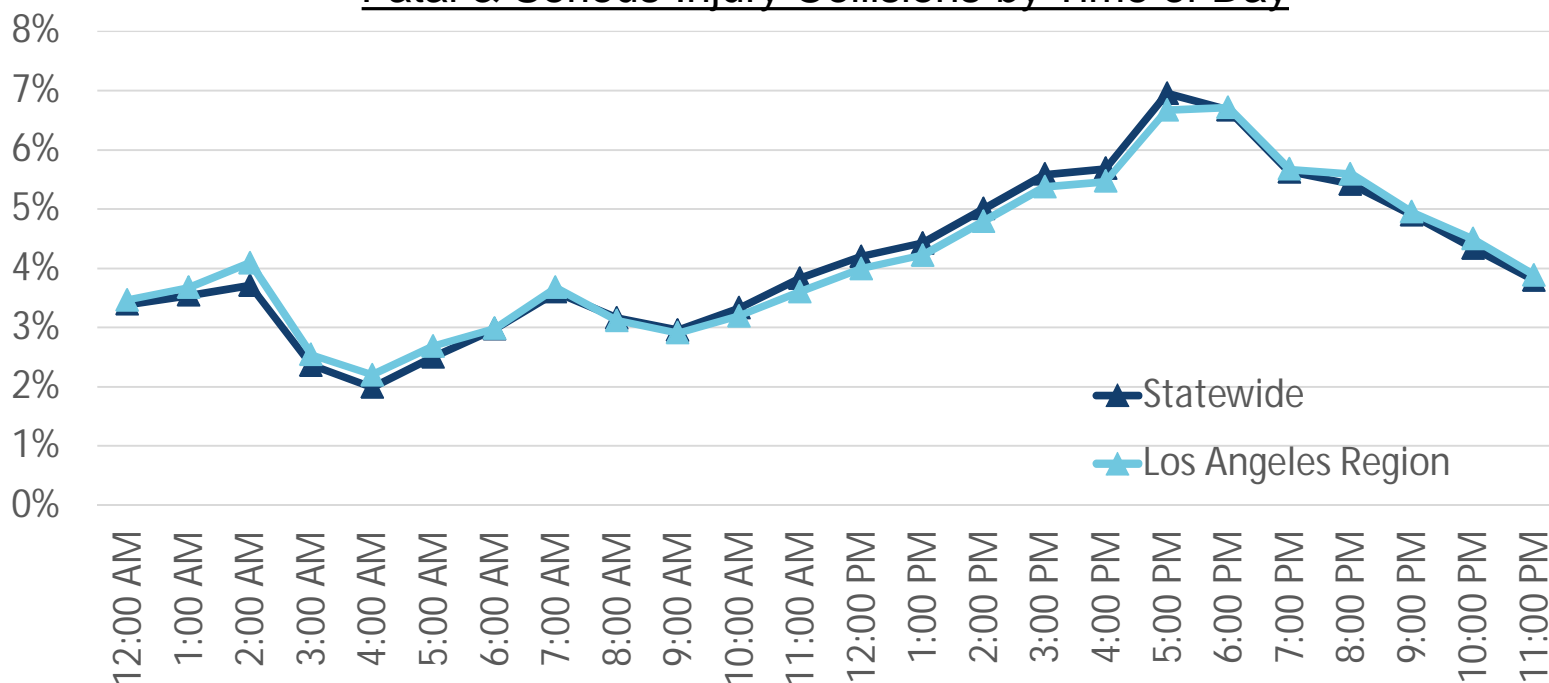


The top 10 primary causes of collisions in this region matches the top 10 primary causes of collisions statewide.

# REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Time of Day

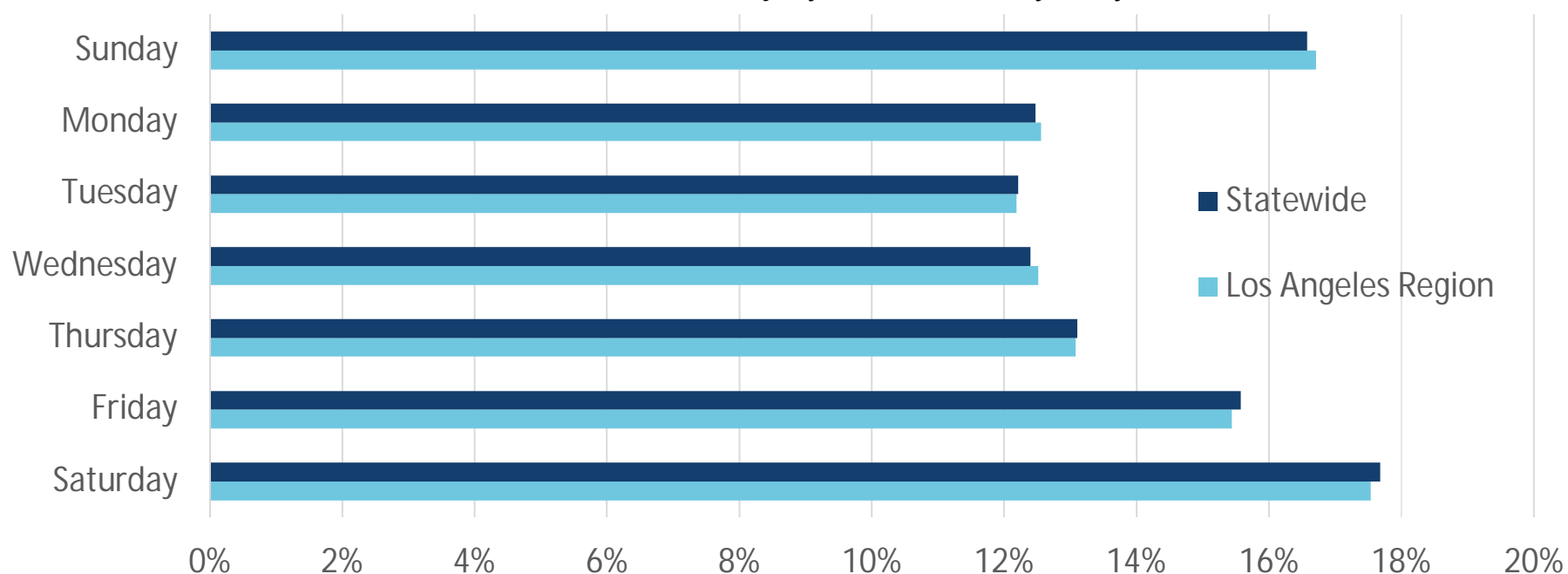


Regional collisions by time of day follows Statewide collision trend.

# REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Day of Week

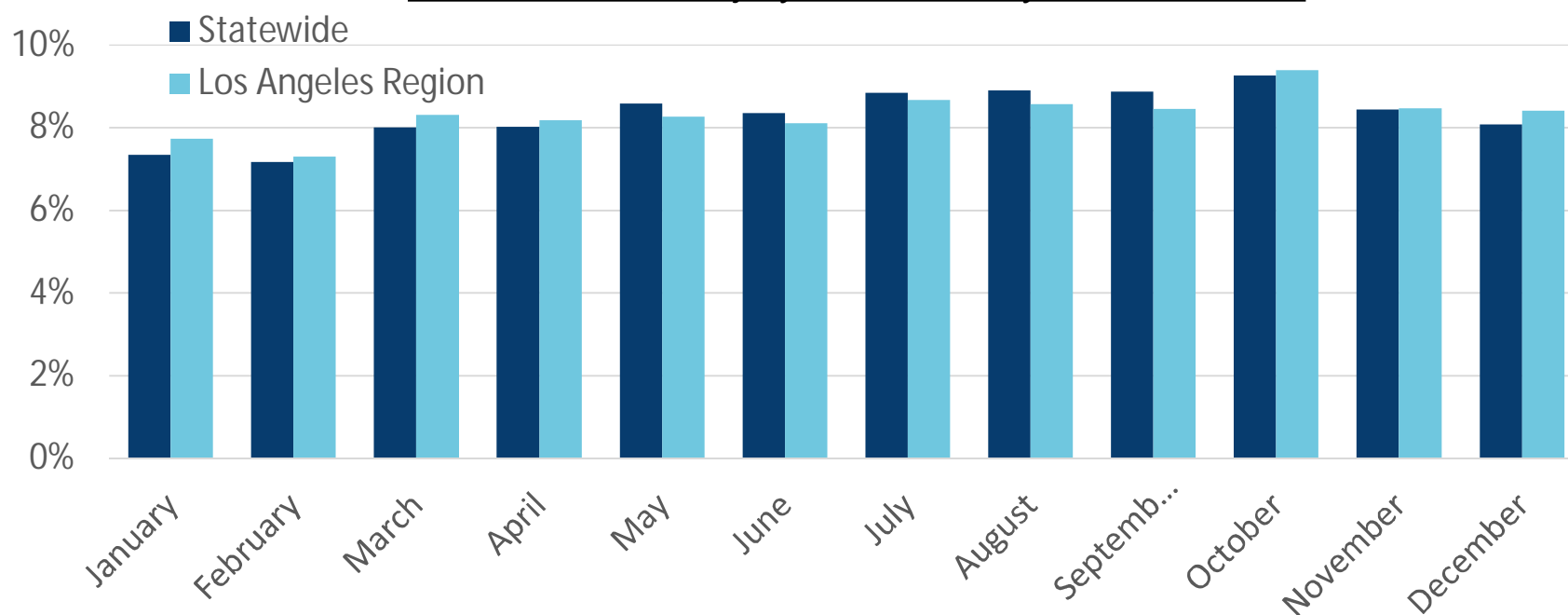


Trends were similar in this region to California overall.

# REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Month of Year



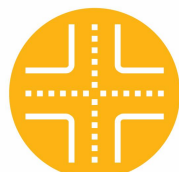
More collisions occurred in the winter months and less in summer months in this region than California overall.



# COLLISIONS OVERVIEW



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan



Intersections & Interchanges  
Statewide: 43%  
Los Angeles Region: 44%



Alcohol and Drug Impairment  
Statewide: 42%  
Los Angeles Region: 41%



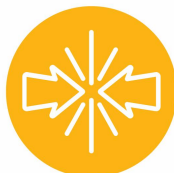
Speeding and Aggressive Driving  
Statewide: 28%  
Los Angeles Region: 30%  
Higher



Pedestrians  
Statewide: 23%  
Los Angeles Region : 26%  
Higher



Driver Licensing and Competency  
Statewide: 25%  
Los Angeles Region: 25%



Roadway Departure  
Statewide: 26%  
Los Angeles Region : 20%  
Lower



Occupant Protection  
Statewide: 19%  
Los Angeles Region: 18%



Motorcycles  
Statewide: 14%  
Los Angeles Region: 15%



Young Drivers  
Statewide: 13%  
Los Angeles Region: 14%



Aging Drivers  
Statewide: 14%  
Los Angeles Region: 13%



Commercial Vehicles  
Statewide: 10%  
Los Angeles Region: 10%



Distracted Driving  
Statewide: 5%  
Los Angeles Region: 5%



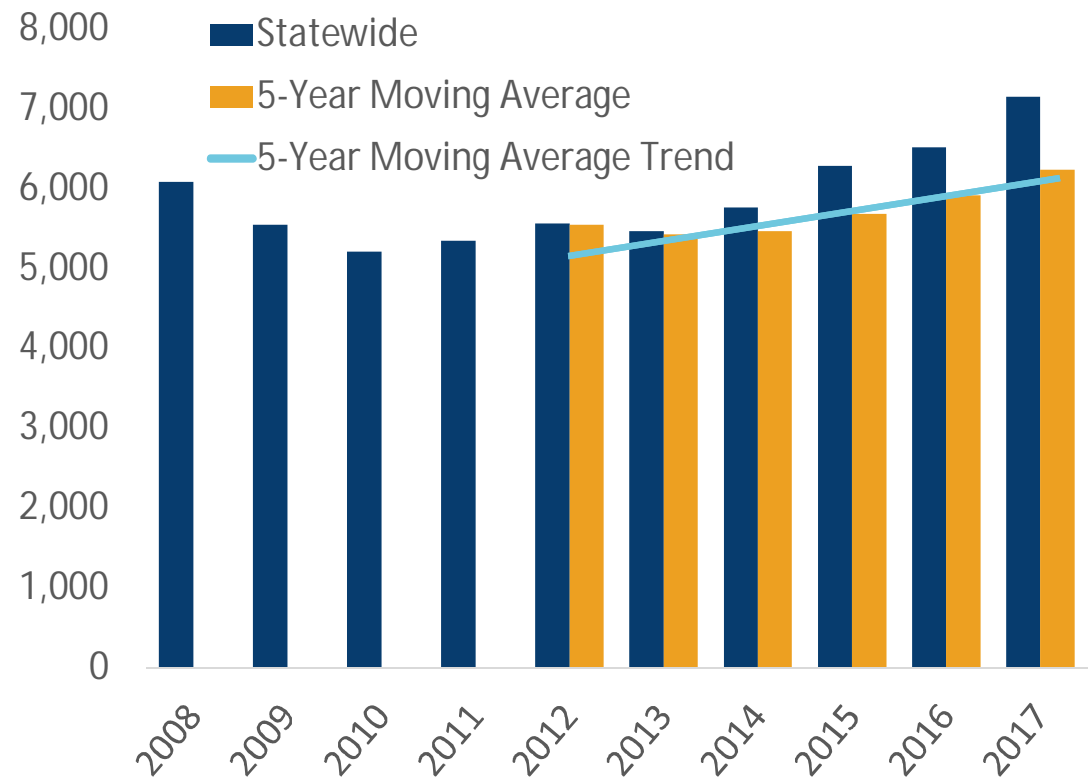
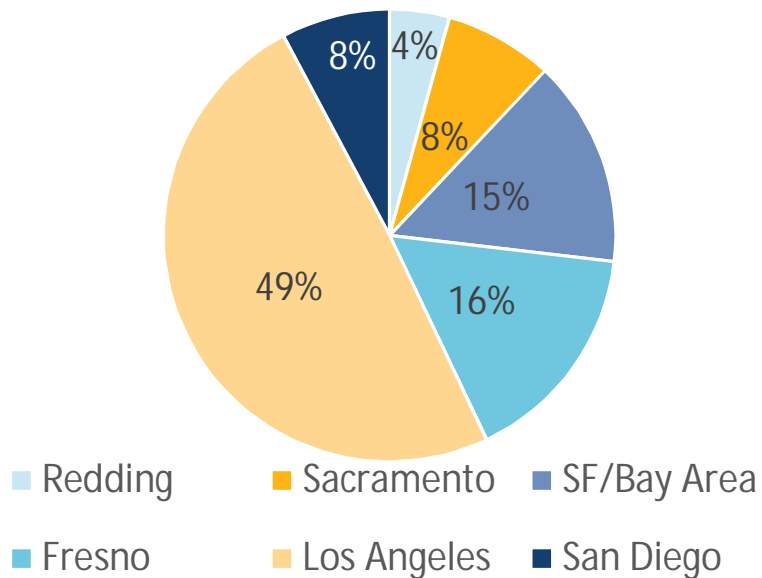
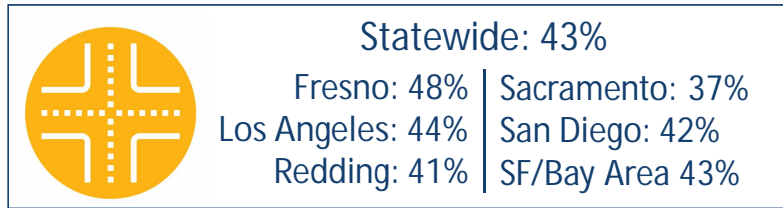
Bicycling  
Statewide: 4%  
Los Angeles Region: 4%



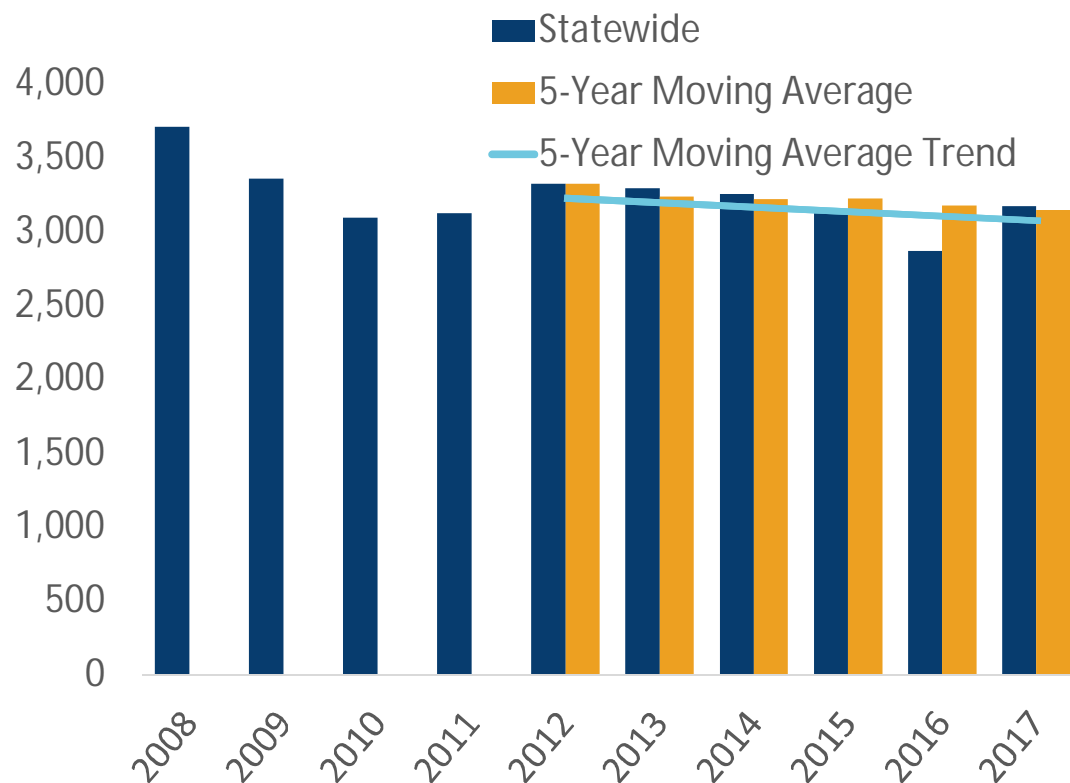
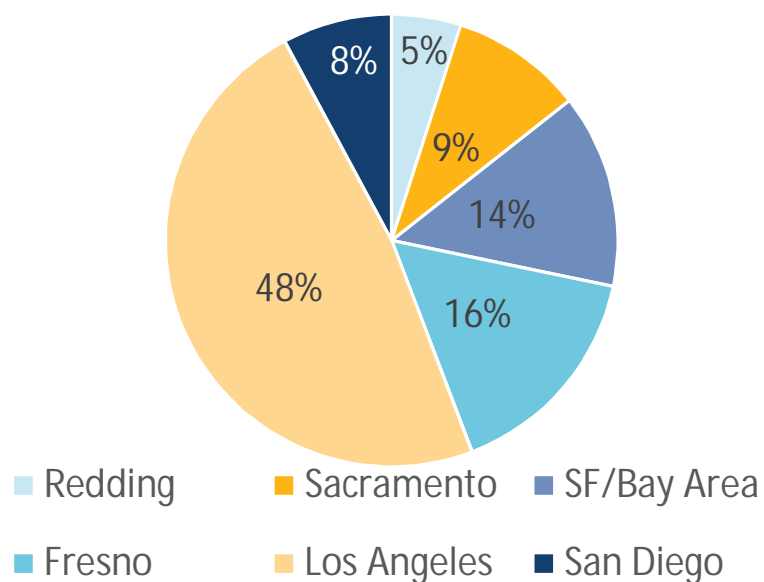
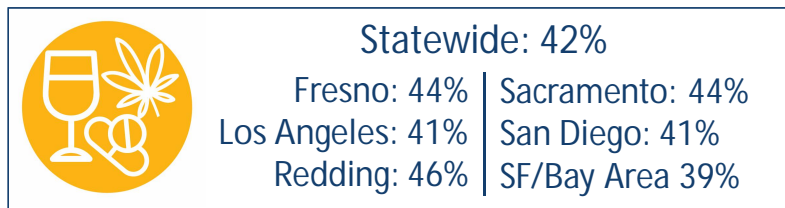
Work Zone  
Statewide: 2%  
Los Angeles Region: 2%

Percent of  
total fatalities

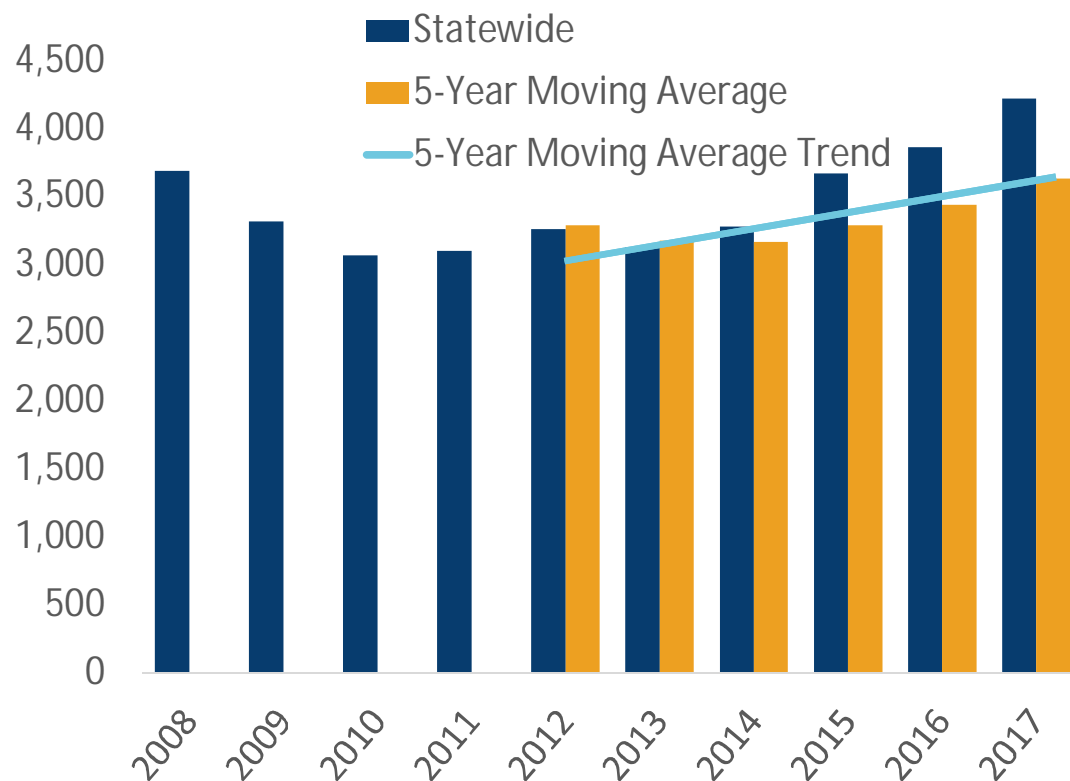
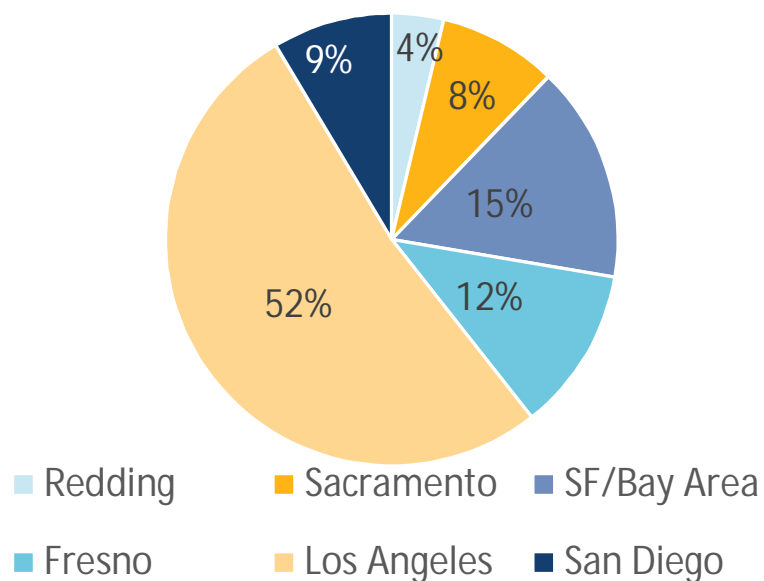
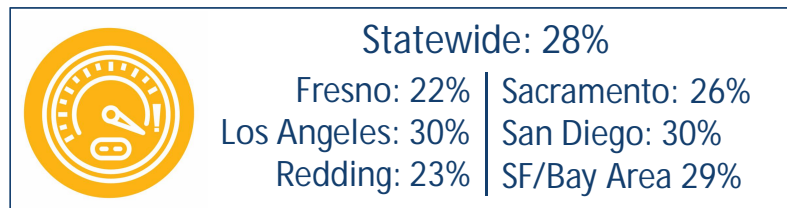
# INTERSECTIONS & INTERCHANGES



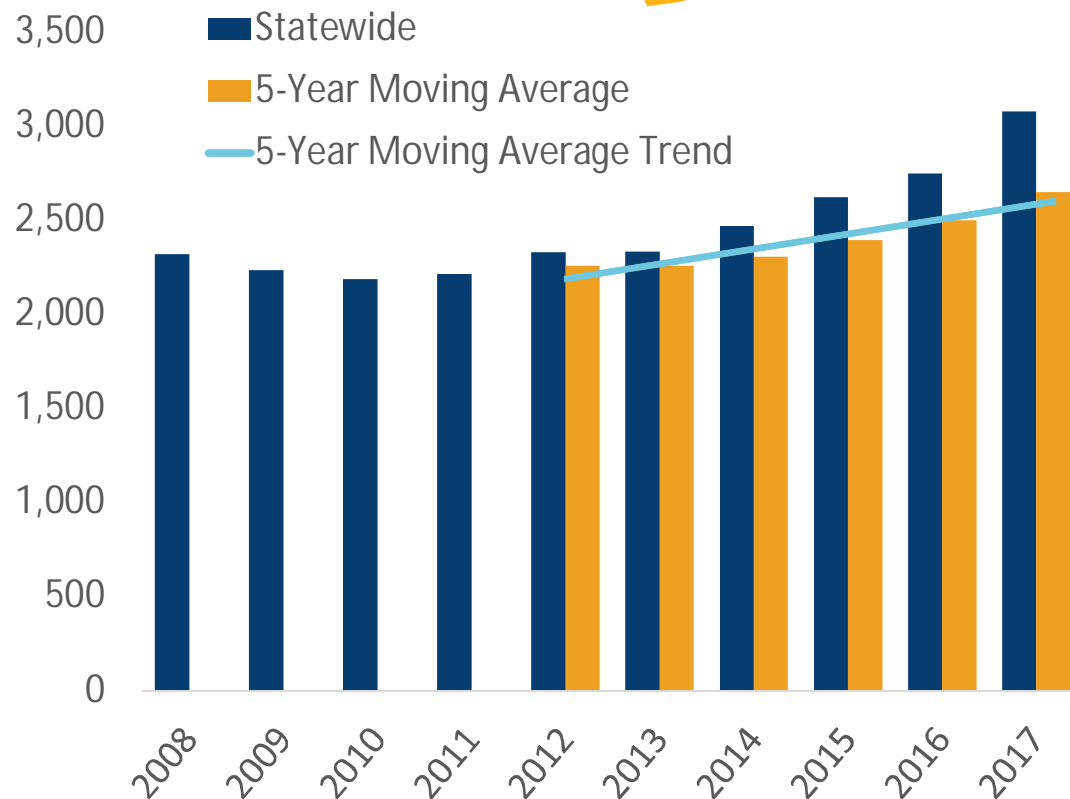
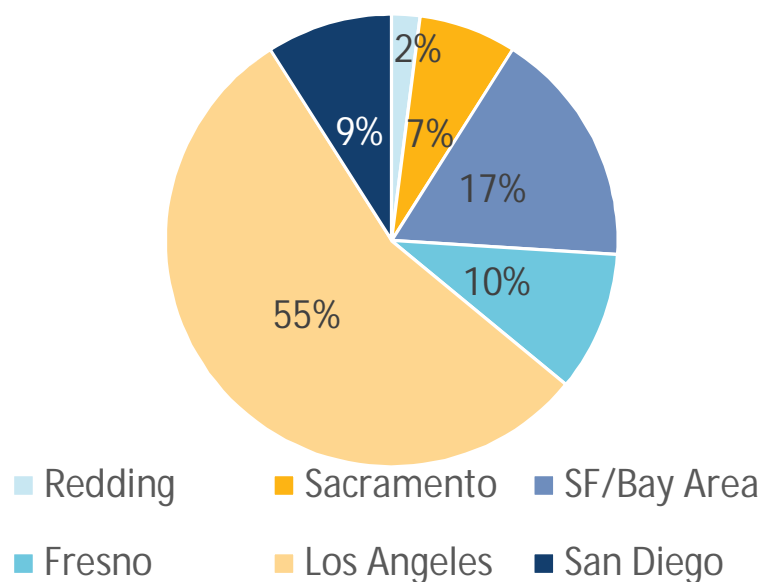
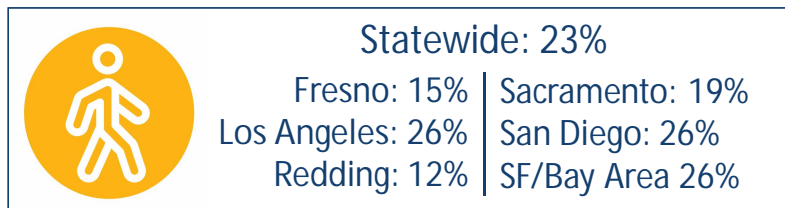
# ALCOHOL & DRUG IMPAIRMENT



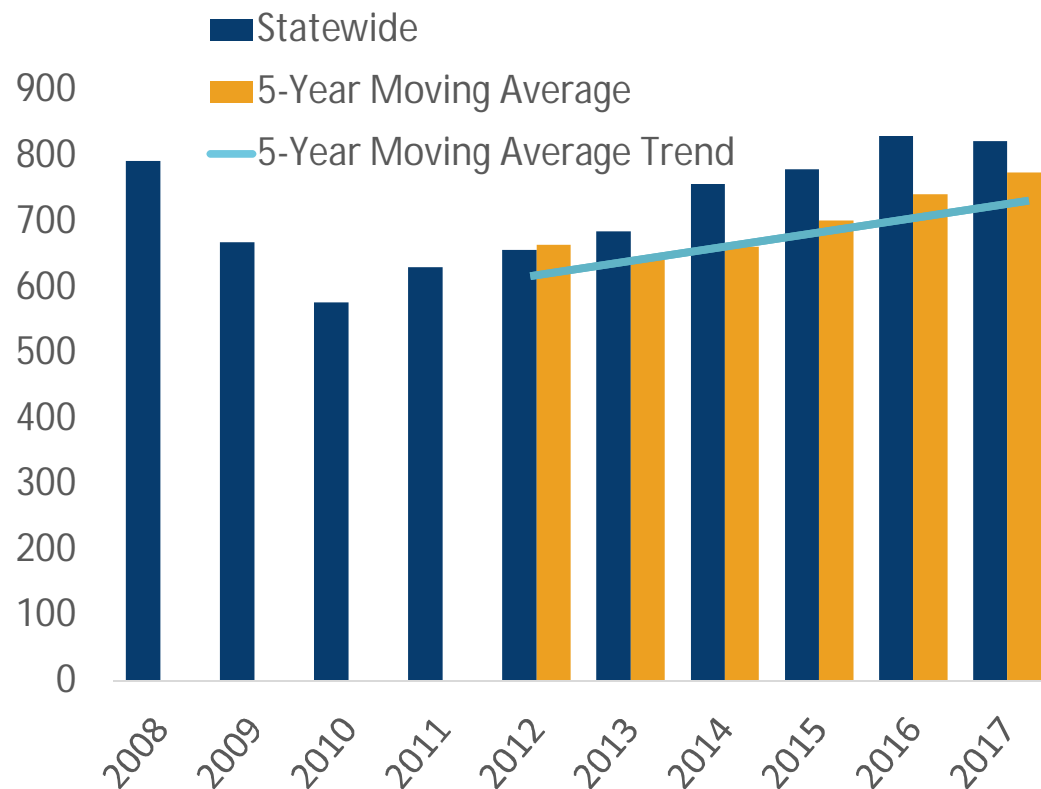
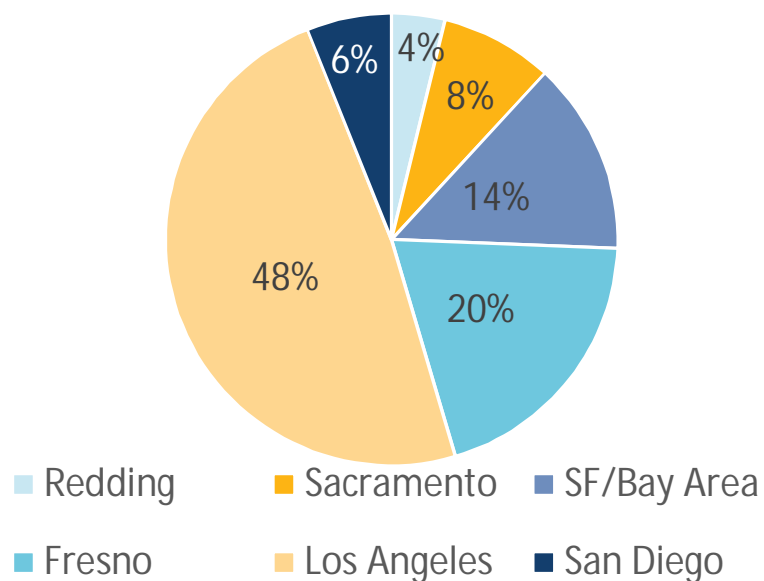
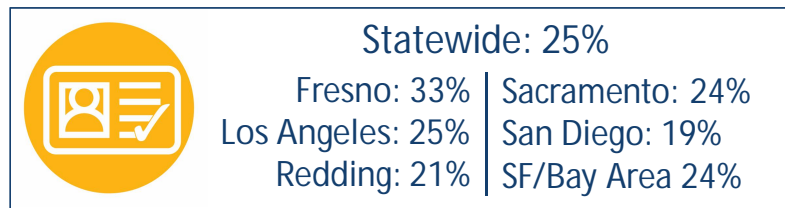
# SPEEDING & AGGRESSIVE DRIVING



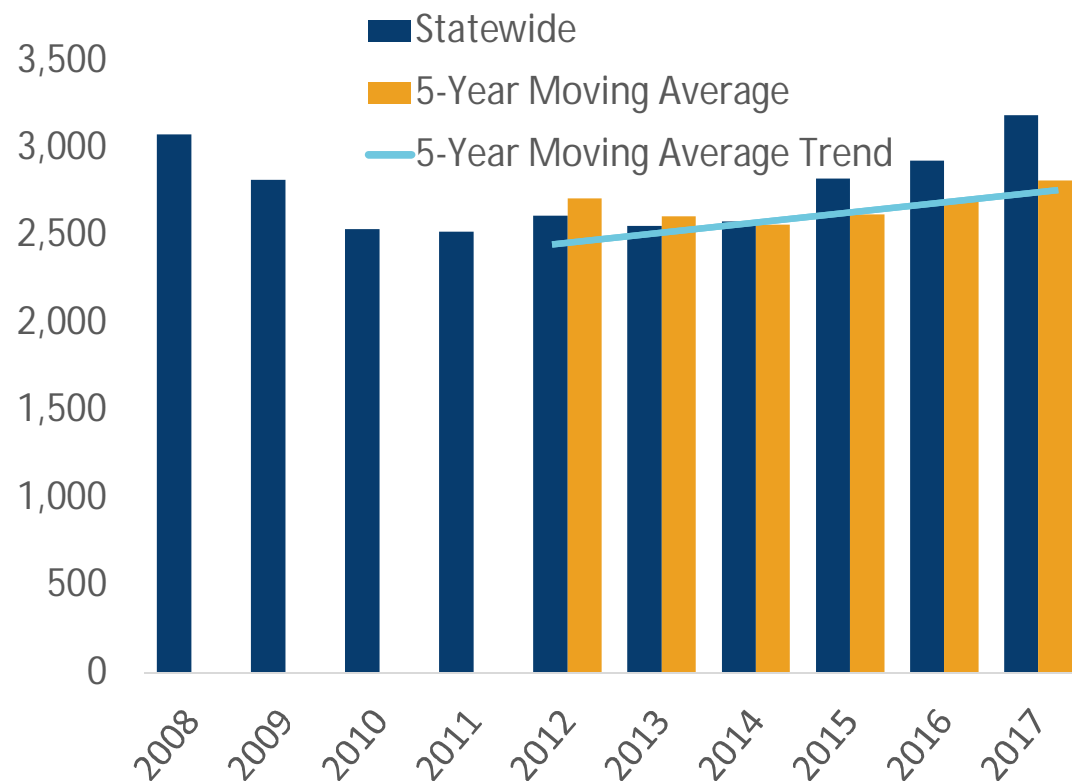
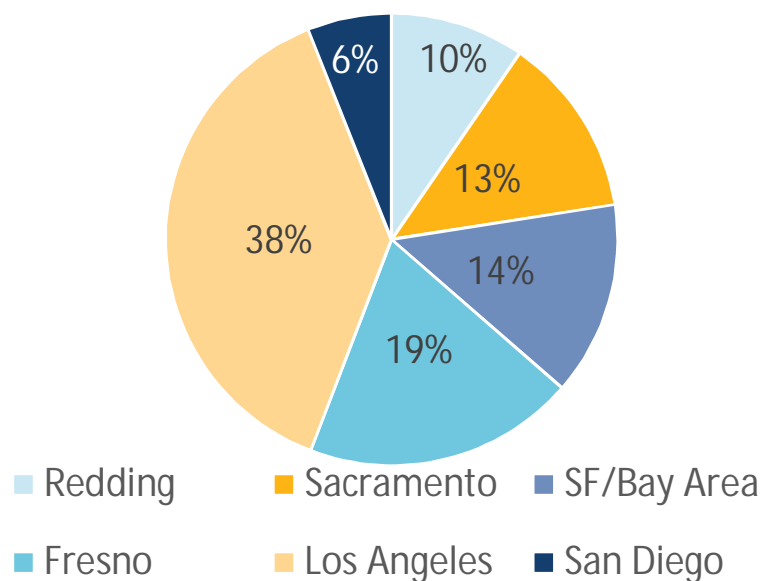
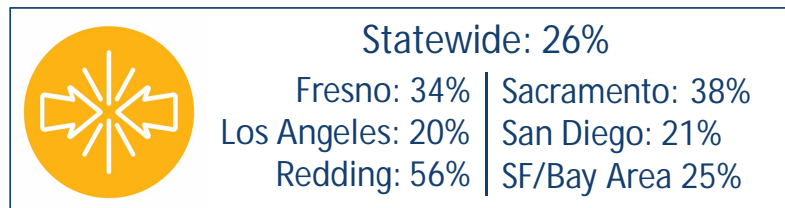
# PEDESTRIANS



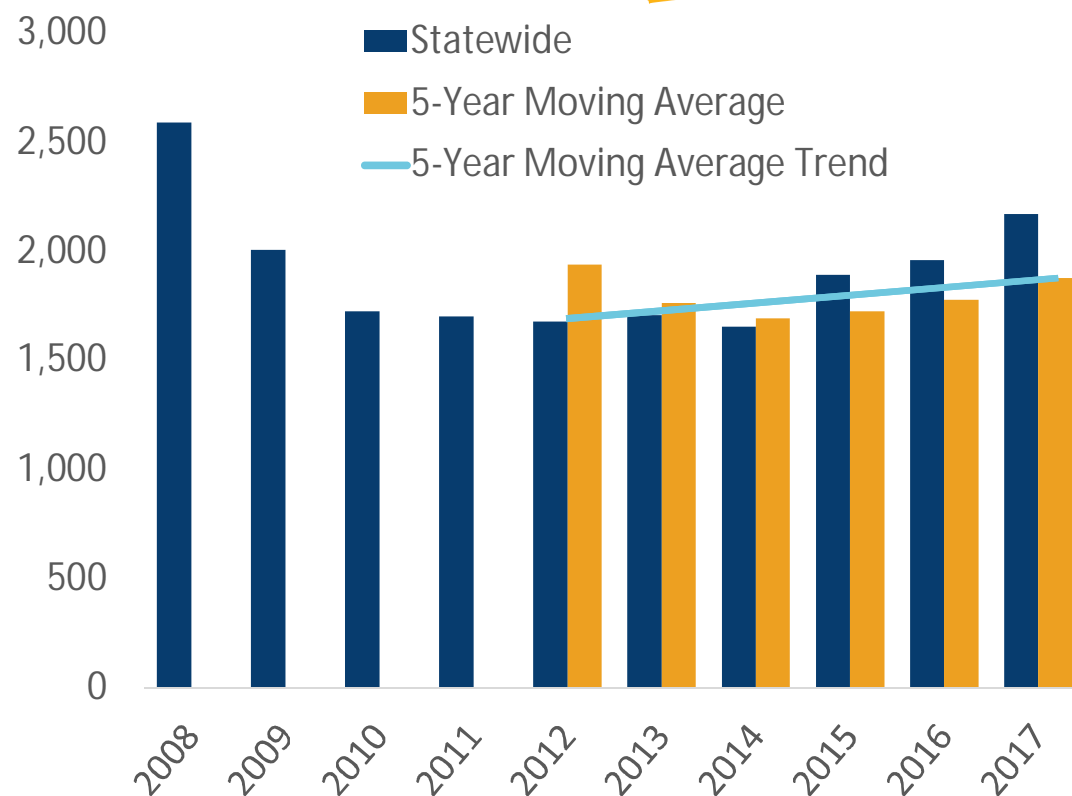
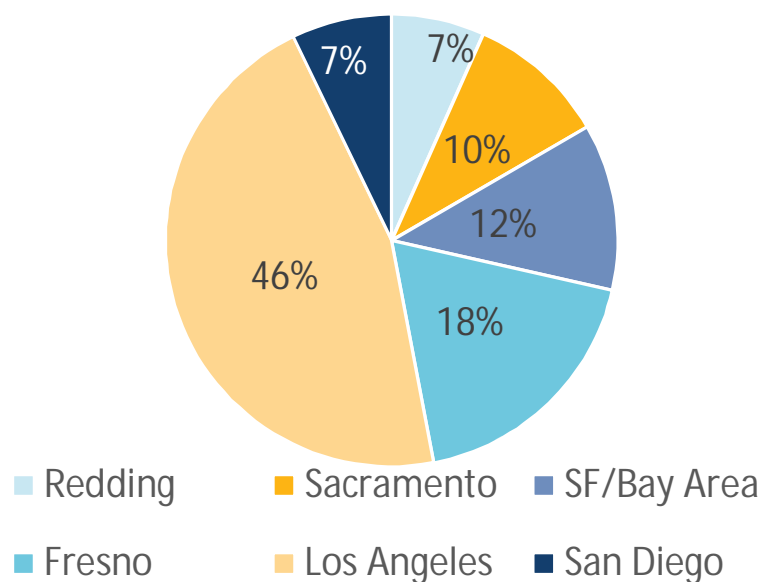
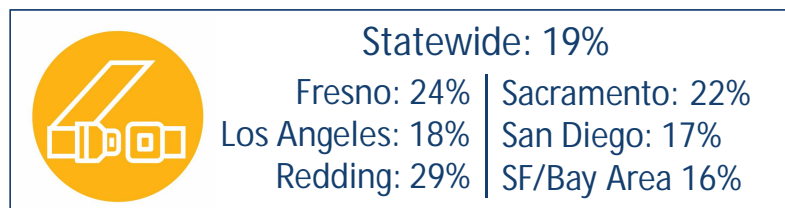
# DRIVER LICENSING & COMPETENCY



# ROADWAY DEPARTURES



# OCCUPANT PROTECTION



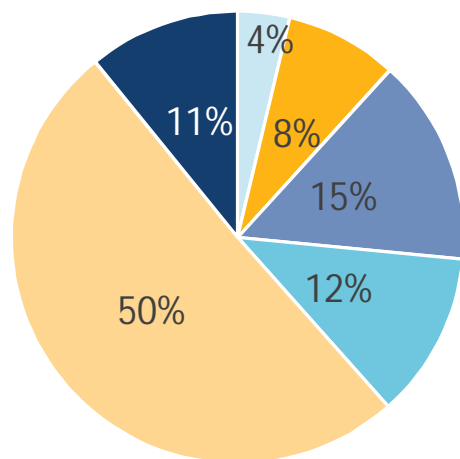


# MOTORCYCLES



Statewide: 14%

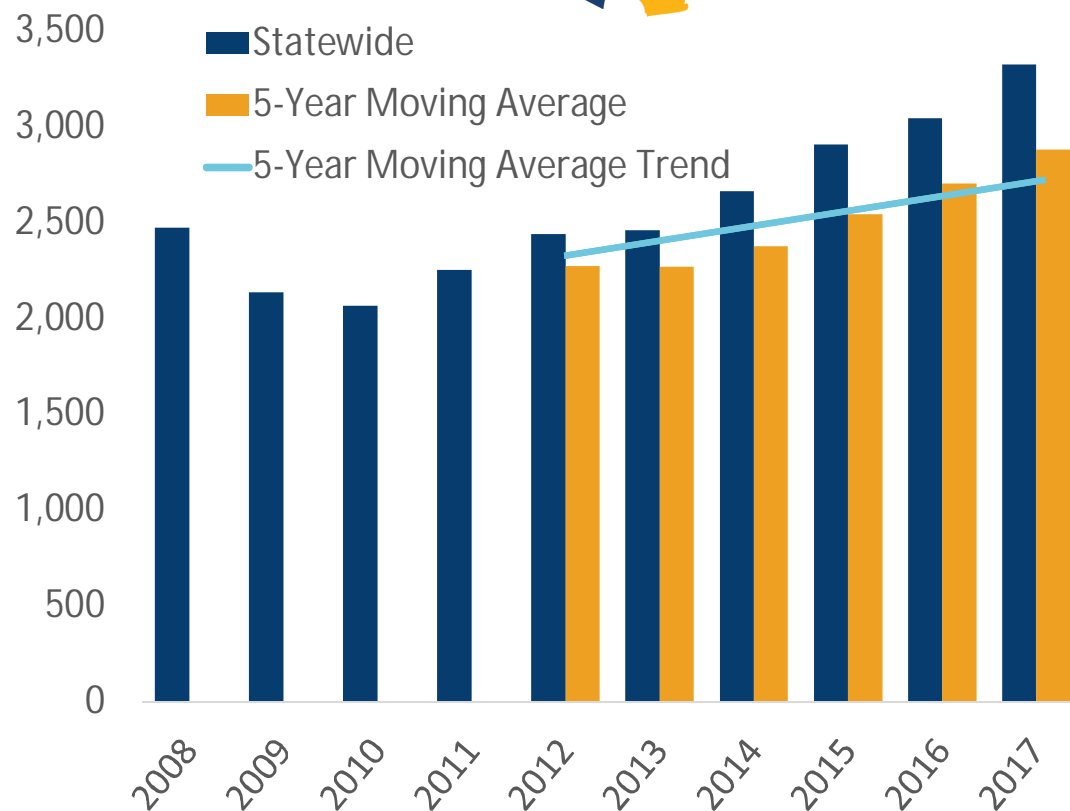
Fresno: 11%	Sacramento: 13%
Los Angeles: 15%	San Diego: 19%
Redding: 12%	SF/Bay Area: 14%



■ Redding
 ■ Sacramento
 ■ SF/Bay Area  
■ Fresno
 ■ Los Angeles
 ■ San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

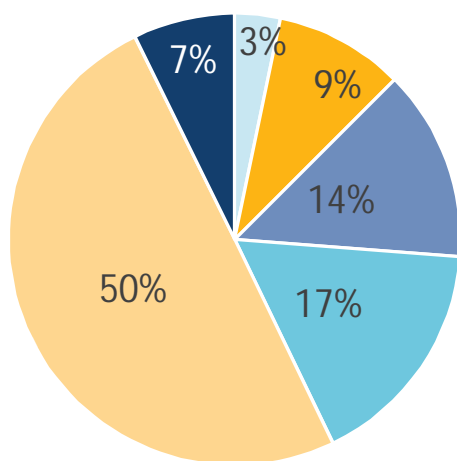


# YOUNG DRIVERS



Statewide: 13%

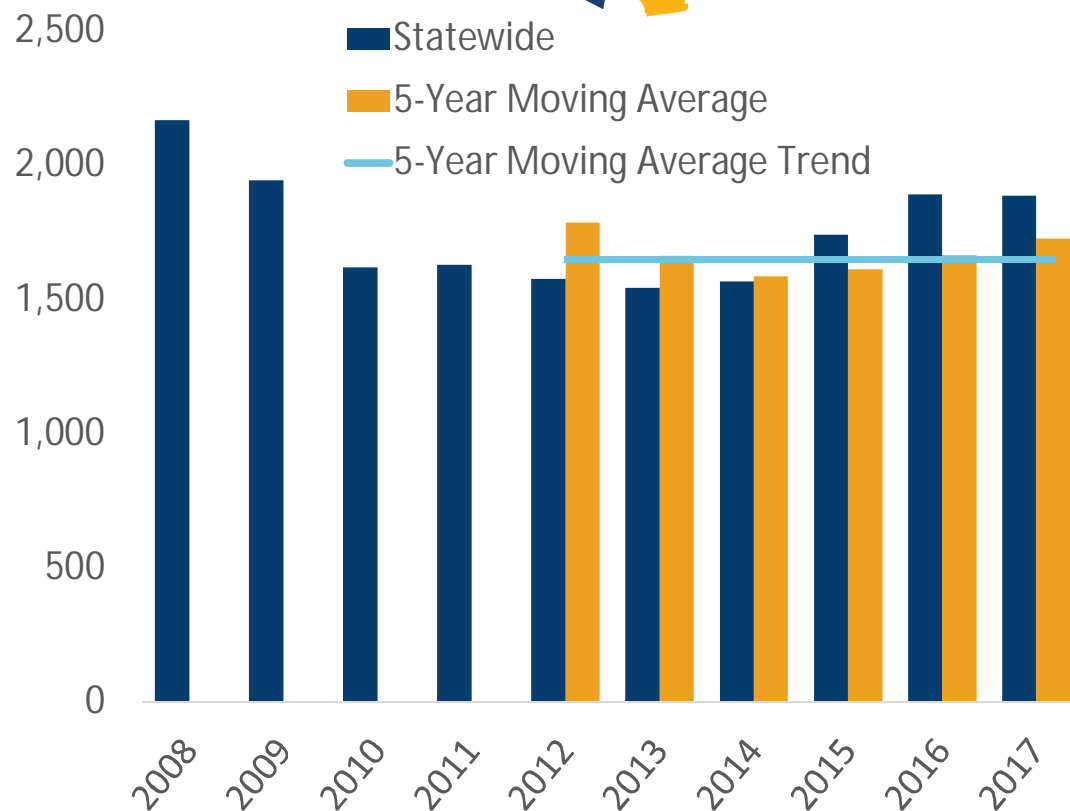
Fresno: 15%	Sacramento: 14%
Los Angeles: 14%	San Diego: 12%
Redding: 10%	SF/Bay Area: 13%



Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

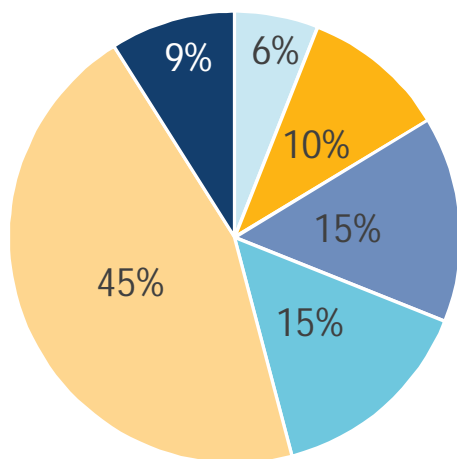


# AGING DRIVERS



Statewide: 14%

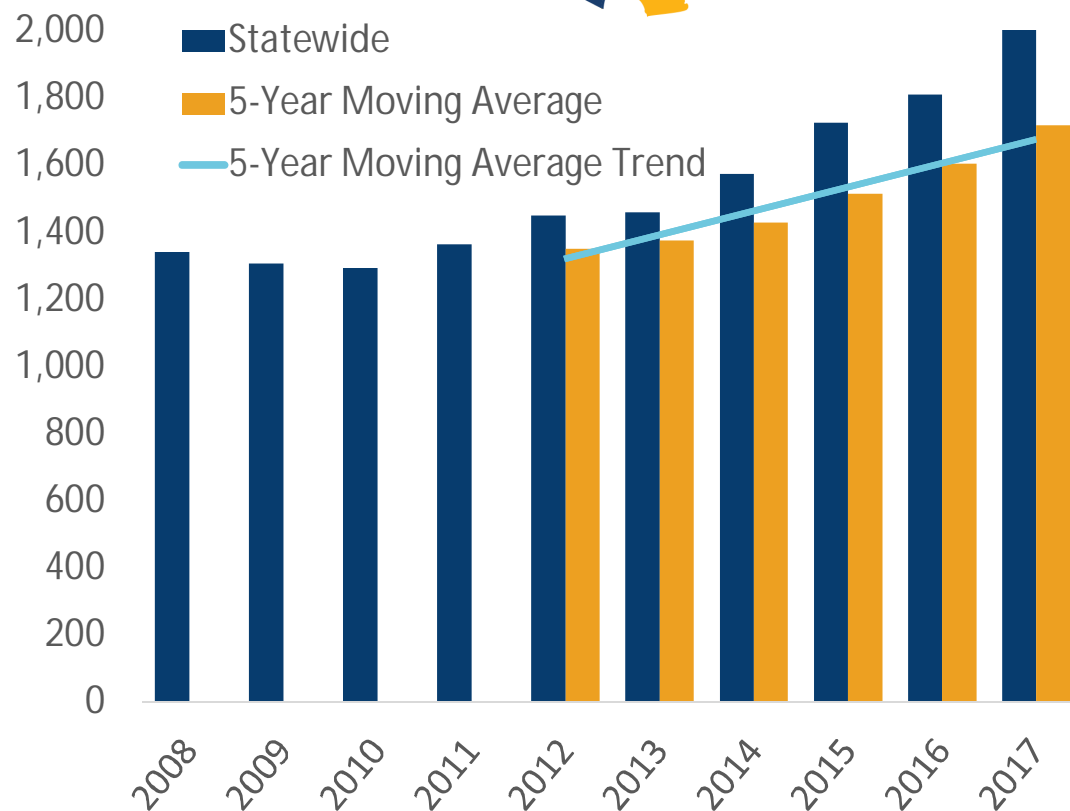
Fresno: 14%	Sacramento: 16%
Los Angeles: 13%	San Diego: 15%
Redding: 19%	SF/Bay Area: 14%



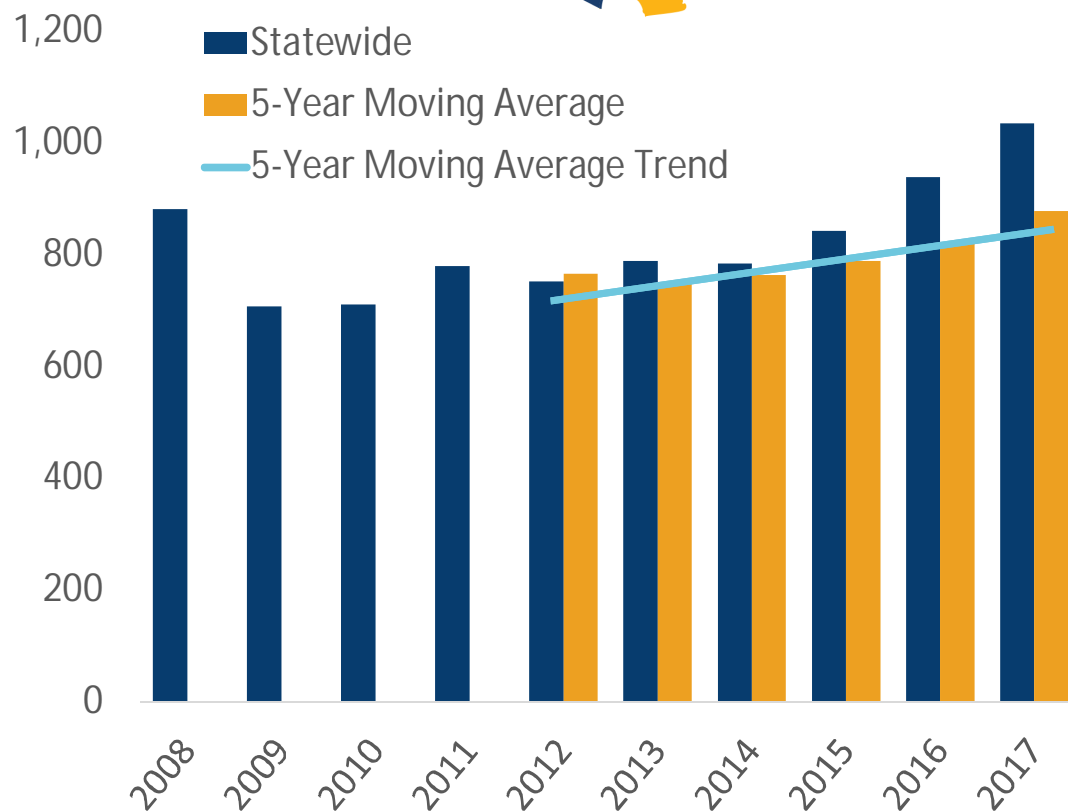
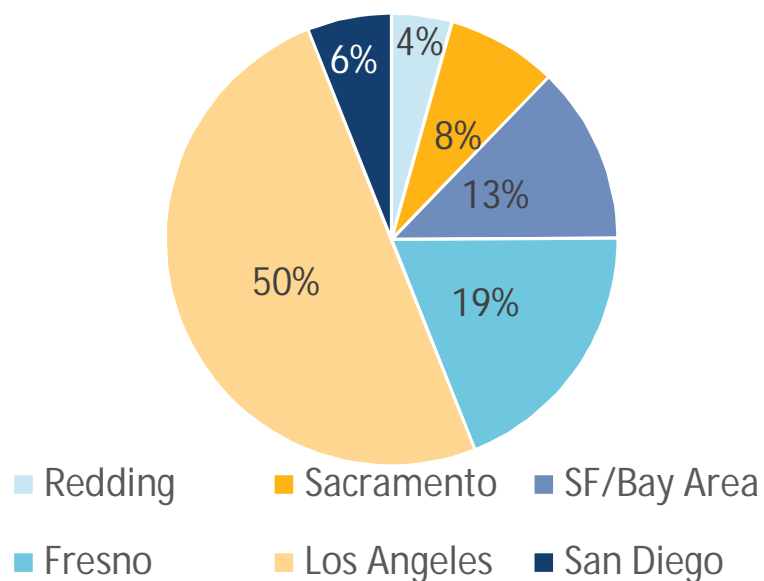
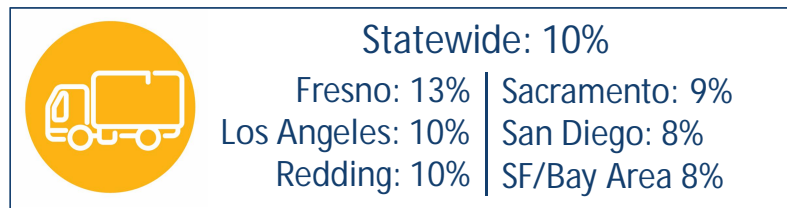
■ Redding
 ■ Sacramento
 ■ SF/Bay Area  
■ Fresno
 ■ Los Angeles
 ■ San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan



# COMMERCIAL VEHICLES

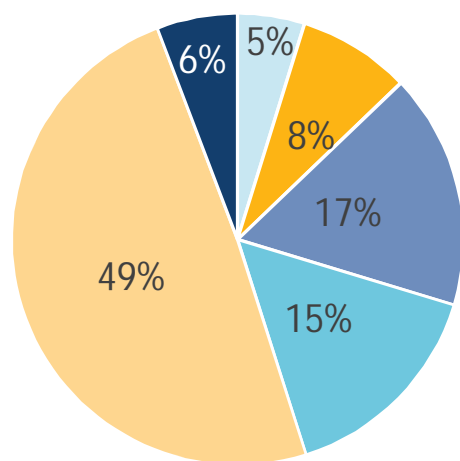


# DISTRACTED DRIVING



Statewide: 5%

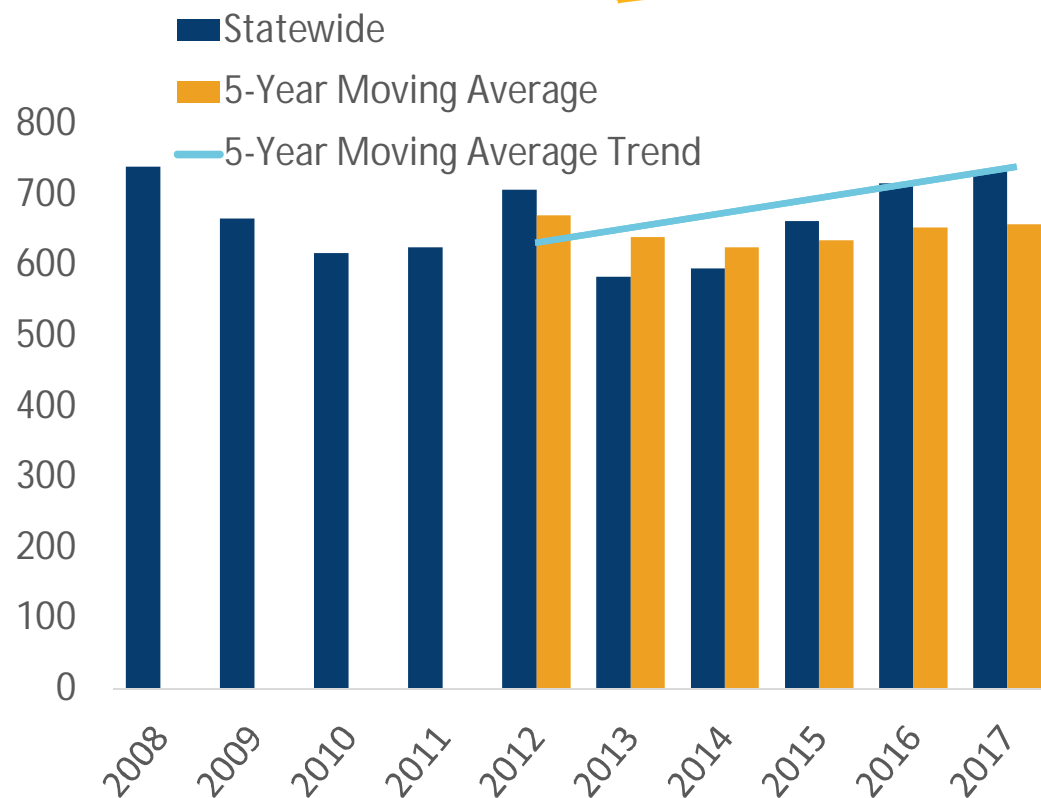
Fresno: 5% | Sacramento: 4%  
Los Angeles: 5% | San Diego: 3%  
Redding: 5% | SF/Bay Area 5%



Redding Sacramento SF/Bay Area  
Fresno Los Angeles San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

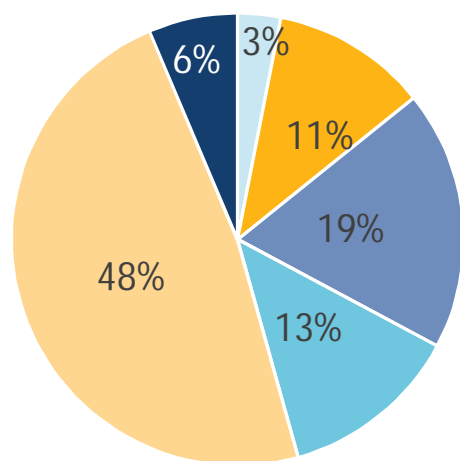


# BICYCLING



Statewide: 4%

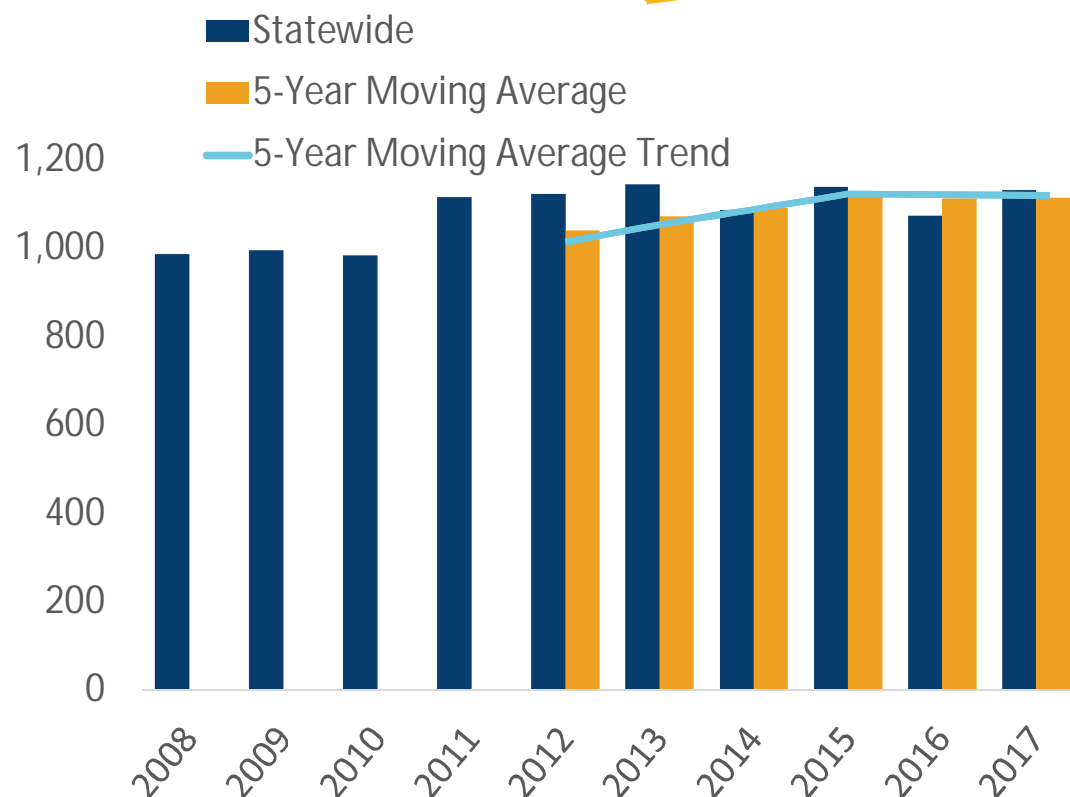
Fresno: 4%	Sacramento: 5%
Los Angeles: 4%	San Diego: 3%
Redding: 3%	SF/Bay Area 6%



Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan

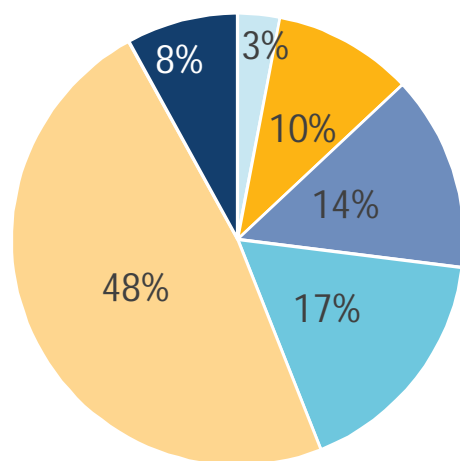


# WORK ZONE



Statewide: 2%

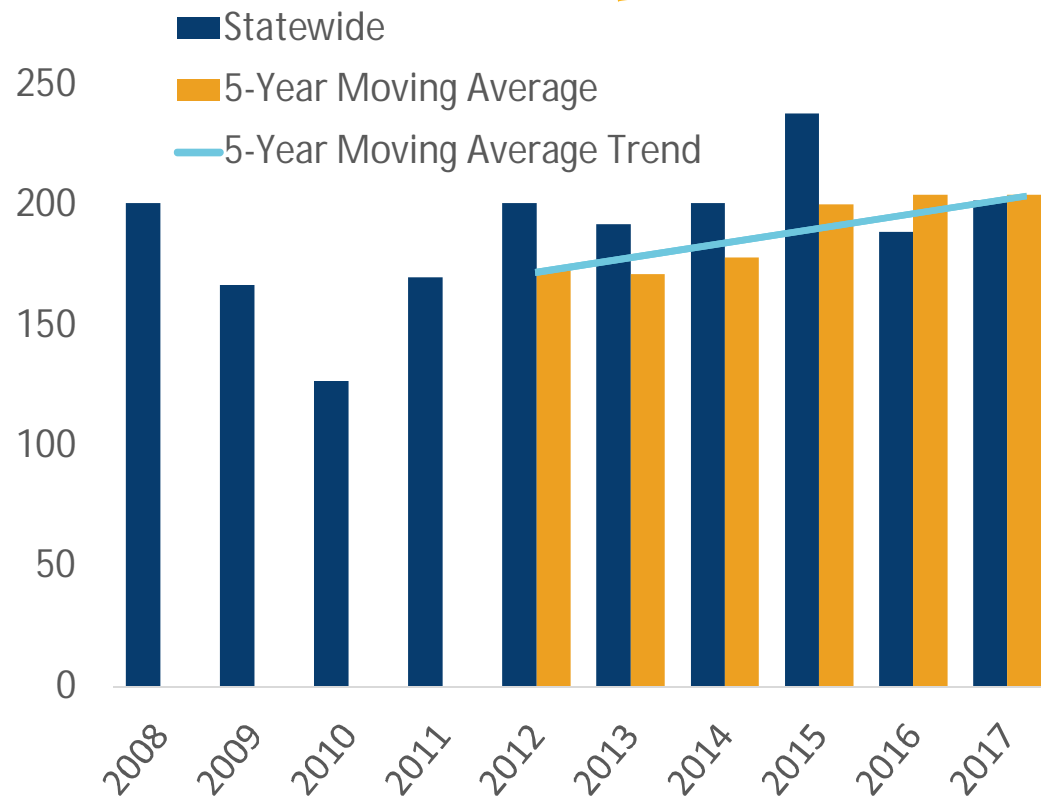
Fresno: 2%	Sacramento: 2%
Los Angeles: 2%	San Diego: 2%
Redding: 1%	SF/Bay Area 2%



Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego



**CALIFORNIA SAFE ROADS**  
2020 - 2024 Strategic Highway Safety Plan





# **CALIFORNIA SAFE ROADS**

*2020 - 2024 Strategic Highway Safety Plan*

Safety Strategy Session





# SAFETY STRATEGY SESSION



- Open House Format
- Discuss data and strategies with facilitators and attendees at 5 stations
- Fill out comment forms
  - What is the biggest safety issue in your community?
  - What specific data should drive the strategies?
  - What strategies/programs are most effective in your region?
  - What can be done to improve implementation?
  - What other ideas do you have?

# SAFETY STRATEGY SESSION



- Handouts
  - Statewide Overview
  - Data specific to each sub category
  - Example strategies
  - Comment Forms

# Safety Strategy Session



- Stations

## Overview

Collision Overview

Vision / Mission / Objective

## Drivers & Passengers

1. Driver licensing
2. Aggressive driving
3. Driving under influence
4. Distracted driving
5. Occupant protection
6. Young drivers (<21)
7. Aging drivers (>65)
8. Commercial vehicle operations

## Infrastructure

9. Intersections
10. Lane/Roadway departures
11. Work zones

## Vulnerable Users

12. Pedestrians
13. Bicyclists
14. Motorcyclists

## Vehicles























15. Equipment

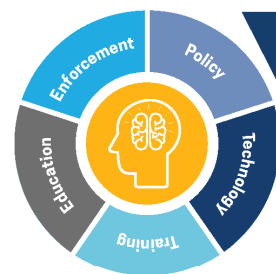
## Emergency Response

16. Emergency Response

# EXAMPLE STRATEGIES

**Infrastructure-Related Collisions** are inclusive of a variety of collision types, including pedestrians, bicyclists, motorcycles, roadway, and intersection collisions.

 Median and Pedestrian Crossing Islands	 	 Longitudinal Rumble Stripes	
 Pedestrian Hybrid Beacon	 	 Median Barriers	
 Leading Pedestrian Intervals		 Tapered Edge	
 Walkways		 Reduce Left-Turn Conflict Intersections	
 Road Diet	 	 Multiple Low-Cost Measures at Stop-Controlled Intersections	
 Crosswalk Enhancements		 Backplates with Retroreflective Borders	
 Corridor Access Management	 	 Dedicated Left-turn and Right-turn lanes	
 Roadside Design Improvement at Curves	 	 Roundabouts	
 Enhanced Delineation and Friction for Horizontal Curves	 	 Yellow Change Intervals	



**Behavior-Related Collisions** are inclusive of a variety of collision types, including aggressive driving, alcohol-involved, drug-involved, distracted, young driver, and aging driver collisions.

## Policy

- All offender alcohol ignition interlock law
- DWI courts
- Stronger graduated driver licensing laws
- Screening of older drivers

## Training

- Employer-based programs targeting workers that are at higher risk of drowsy-driving
- Drug recognition expert training for law enforcement
- Responsible beverage service training
- Motorcycle rider training

## Technology

- Automated enforcement for speed and red light running.

## Education

- Education campaigns about increased enforcement
- Alternative transportation programs
- Increased parental involvement programs
- Mandatory driver education for novice drivers
- Education campaigns for physicians and law enforcement about older driver screening
- Education campaigns targeted to low seat-belt users
- School programs

## Enforcement

- High visibility enforcement
- Publicized sobriety checkpoints
- Saturation patrols
- Enforcement of graduated driver licensing and zero tolerance laws
- Integrated enforcement

# EXAMPLE STRATEGIES



	Median and Pedestrian Crossing Islands		
	Pedestrian Hybrid Beacon		
	Leading Pedestrian Intervals		
	Walkways		
	Road Diet		

	Crosswalk Enhancements		
	Corridor Access Management		
	Roadside Design Improvement at Curves		
	Enhanced Delineation and Friction for Horizontal Curves		

# EXAMPLE STRATEGIES



Longitudinal Rumbe Stripes



Median Barriers



Tapered Edge



Reduce Left-Turn Conflict Intersections



Multiple Low-Cost Measures at Stop-Controlled Intersections



Backplates with Retroreflective Borders



Dedicated Left-turn and Right-turn lanes



Roundabouts



Yellow Change Intervals



# EXAMPLE STRATEGIES



## Policy

- All offender alcohol ignition interlock law
- DWI courts
- Stronger graduated driver licensing laws
- Screening of older drivers



## Training

- Employer-based programs targeting workers that are at higher risk of drowsy-driving
- Drug recognition expert training for law enforcement
- Responsible beverage service training
- Motorcycle rider training



## Technology

- Automated enforcement for speed and red light running.

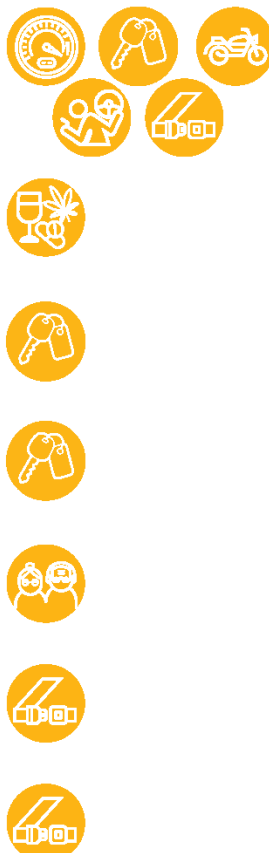


# EXAMPLE STRATEGIES



## Education

- Education campaigns about increased enforcement
- Alternative transportation programs
- Increased parental involvement programs
- Mandatory driver education for novice drivers
- Education campaigns for physicians and law enforcement about older driver screening
- Education campaigns targeted to low seat-belt users
- School programs



## Enforcement

- High visibility enforcement
- Publicized sobriety check-points
- Saturation patrols
- Enforcement of graduated driver licensing and zero tolerance laws
- Integrated enforcement







# **CALIFORNIA SAFE ROADS**

*2020 - 2024 Strategic Highway Safety Plan*

Report Out / Closing

